Four remedies are being de-

manded if the petitions are success-

• A reduction of 1.75m tonnes in

Japanese steel exports to the U.S. by way of compensation for past

harm." Japanese exports have been

running at an annual rate of 5.6m

tonnes in the first ten months of

· Phasing out the alleged world-

wide market-sharing agreement be-tween Japan and the European

Community, under which Japanese

steetmakers allegedly limit their exports "west of Suez" while Japan

sets prices and keeps the Euro-

peans out of "coastal markets in the Far East plus India and Pakistan."

While there are no quota limitations

in other areas, including the Middle

East, eastern Europe and China, Ja-

pan and Europe operate a price-fix-ing agreement for these regions, ac-

Enforcement of Japan's obliga-

tions to the U.S. under the most

favoured nation trade laws. This

would include the opening of Japa

nese markets to imports.

• A 25 per cent import levy on all Japanese steel to reflect the under-

More British Steel jobs go,

Continued on Page 16

cording to Mr Roderick.

U.S. threat to

fight Japan on

JAPANESE steelmakers were of which Mr Roderick is also chair-

this year.

steel imports

BY ANATOLE KALETSKY IN WASHINGTON

threatened with an unprecedented

range of punitive quotas and levies

against their exports to the U.S. yesterday, in a series of unfair trad-

ing petitions announced by the U.S.

ing petitions announced by the 633.

Steel industry.

In a vitriolic attack on "predatory," "discriminatory" and "illegal" trading practices of the Japanese and European steel industries, Mr. David Roderick, chairman of U.S.

Steel, accused Japan and the Euro-pean Community of "flagrantly vic-timising" the U.S. steel industry by

carving up the world steel market

into "spheres of influence," in viola-

hion of the General Agreement on Tariffs and Trade (Gatt), of U.S.

trade laws and of U.S. Japanese

He accused the Japanese Govern-

ment of "artificially maintaining an undervalued yen" and alleged that this, too, was a violation of the Gatt

treaty. He also claimed that the

Japanese steel industry bad

acquired its dominant position in

world markets through a pro-gramme of government subsidies

Pelitions detailing these charges

will be filed today under Section 301

of the 1974 Trade Act with Mr Willi-

am Brock, the U.S. trade represen-

tative, by U.S. steel, seven other major steel companies and the American Iron and Steel Institute,

and protectionism."

NEWS SUMMARY:

GENERAL **British** health pay row settled

Britain's health service workers are to end their bitter pay struggle after

The Trades Union Congress health committee took 90 minutes to vote I3-8 to accept the Government offer of 8 to 7.5 per cent increases this year, with a further 4.5 per cent for 1983-84.

The decision is a boost for the Cabinet's campeign to bold down wage increases. Page 16

Token farm rises Britain and West Germany may be

offered only token EEC farm price increases next year. France and Belgium are among the countries that stand to do better. Page 16

Yemen toll rises

Rescue workers dug another 1,000 bodies from ruined buildings in North Yemen, bringing the total killed by Monday's earthquake to

Union men convicted

Roy Williams, president of the Teamsters, the biggest union in the U.S., and four other union officials and associates were convicted in Chicago of attempting to bribe for-mer Senator Howard Cannon to help avert deregulation of the haulage industry.

Walesa stays away

Polish workers' leader Lecb Walesa, who plans to take part in a public meeting at Gdansk this afternoon, did not attend the local prosecutor's office yesterday, saying the sum-mons arrived late. Page 2

Afghan exile's tale

Afghan secret service chief Lt Gen Ghulan Siddig Miraki, who has defected to Pakistan, claimed that Soviet leader Leonld Brezhnev, who died last month, bad planned to annex Afghanistan.

Darmstadt bomb

A U.S. Army captain was injured when a bomb exploded in his car at Darmstadt - the 80th terrorist strike against U.S. interests in West Germany this year.

German arrests

West German police recovered three sub-machine guns stolen from the bodyguards of Foreign Minister Hans-Dietrich Genscher, and arrested three suspects in a Wuppertal games parlour.

Hungarian swoop

Hungarian police seized duplicating machines and publications in a series of night raids to clamp down on dissident publishing activities.

New Zealand move

New Zealand's Government introduced legislation to overturn a legal judgement that a wage freeze for 187,000 public servants contravened the Act under which they were em-

S. African explosion

An explosion damaged an electricity station at Verceniging, near Johanneshurg, and power was cut in some areas.

Briefly...

Three drug traffickers were hanged near Ipoh, Malaysia

China is plagued by rats, who have thrived as the snake and cat populations have declined.

Singapore cargo sbip rescued 60 who ahandoned an Indian freighter 700 miles off the U.S. Pacific coast. Peruvian coastguards arrested seven Greenpeace anti-whaling protesters and their ship.

BUSINESS

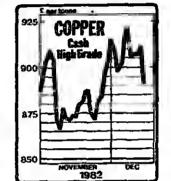
Grundig fears on **Thomson** deal

• GRUNDIG, the West German electrical and electronics group, is concerned that political obstacles may prevent the agreed deal that Thomson-Brandt of France should take a 75.5 per cent interest. It has also been having talks with Ger-man electrical group Robert Bosch and the Dutch multinational Philips, which has a 24.5 per cent share in Grundig. Page 16

DOLLAR was a little firmer, closing at DM 2.45 (DM 2.441), FFr 6.9475 (FFr 6.9175), SwFr 2.0875 (SwFr 2.0825) and Y244.75 (Y244.5). Its Bank of England trade-weighted index rose from 120.9 to 121.3. Page

• STERLING fell 35 points to \$1.612, and from Y395 to Y394.75. But it improved to DM 3.9525 (from DM 3.945), FFr 11.195 (FFr 11.17), and SwFr 3.3675 (SwFr 3.365). Its trade weighting edged down from 85.9 to 85.8. Page 34

• GOLD fell \$12.75 in London to \$437.25, by \$11.75 in Frankfurt to \$437.75, and by \$12 in Zurich to \$438.5. Page 23



BRAZII. has reached agreement discussion, paves the way for Brazil with the International Monetary Fund (IMF) on an austerity pro- and Japanese banks for more, ur-• COPPER led a general decline in prices on the London Metal Exchange, with cash high-grade copper £19.25 down at £891 (\$1,436.3) a tonne. Silver, platinum and tin were also down. Page 23

• LONDON: FT Industrial Ordinary index fell 9.9 to 586.6. Government Securities were steady.

• WALL STREET: Dow Jones index closed 16.74 down at 992.64. Page 24 • TOKYO: Nikkei Dow index fell 30.67 to 7,882.95. Stock Exchange Index eased 1.86 to 380.77, Page 24 • HONG KONG: Hang Seng index slipped 0.95 to 802.89. Page 24

● AUSTRALIAN all-share index closed 2.1 down at 477.4. Page 24 • FRANKFURT: Commerzbank index dropped 8.2 to 743.9. Page 24

 IRAN bas approached South Korea for belp in finishing the wardamaged petrochemical project at Bandar Khomeini, about which it has not come to terms with Japan.

• WEST GERMAN unemployment will peak at nearly 3m, about 12.5 per cent of the workforce, in early 1984, the Kiel Institute of World

Economics forecasts. • DENMARK'S national debt will rise by DKr 200hn (\$23.46bn), according to the chief economist of the Federation of Danish Indus-

• U.S. INDUSTRIAL production fell 0.4 per cent in November, fol-lowing 0.8 per cent falls in the previous two months. Page 4

AT&T, the leading U.S. telephone company, hoosted net profits for the year ended November 7.4 per cent at \$7.21bn, though fourth quarter figures were 3 per cent down.

 TOSH1BA, Japanese electrical goods group, reported prafits 16 per cent lower for the half ended September, at Y18.5hn (578m). Page 19 • THYSSEN INDUSTRIE, German steel maker, expects to transfer DM 78.7m (\$32.1m) profits to its group parent for the year ended Septem-ber, after rationalisation brought a dramatic improvement. Page 17

Mexico loan gets backing of U.S. and UK bankers

BY ALAN FRIEDMAN IN LONDON AND PAUL TAYLOR IN NEW YORK

Mexico's U.S. and British creditor banks have rallied to support the country's international loan request for a \$5bn commercial bank package.

Yesterday was the deadline set campaign to persuade the smaller regional hanks to maintain lending for bank responses to a request hacked by the International Monetary Fund (IMF) and the world's leading central banks that commercial hanks commit 7 per cent of their existing loan exposure to Mex-

In New York, bankers said last night that the response to Mexico's request for additional loans bad been "very positive." One senior banker said that replies bad been coming in steadily and that everything appears to be going remark-ably smoothly."

In London, an executive at Lloyds Bank, which is coordinating re-sponses from 55 British banks, said that more than three quarters of the responses had arrived and "we baven't bad a single negative re-

It will be some time before the responses fram the 1,200 U.S. banks with \$25bn of outstanding loans to the Mexican private and public sectors can be fully collated. This task will fall to Citibank, which has been heading the advisory committee dealing with the U.S. banks.

If the final responses prove as positive as was being suggested yesterday, it will be a major achievement for the large U.S.

gramme in return for loans totall-

ing over \$5.5bn, spread over the

The country has requested a standby loan of \$4.5bn from the

IMF and a two-part loan of \$1.07bn

pected to be finalised after the

agreement with the IMF is signed.
Sr Ernane Galvess, the Finance

zil had requested the loan from the

Basie-based BIS, which is con-

tional Settlements of \$1.2bn is ex- itors.

next three years.

banks.

south of the border.

Bankers in London said they were encouraged by the responses to what is an unprecedented type of international bank rescue package.

According to the latest estimates, British hanks are expected to provide some \$420m with their total Mexican loan exposure at around Among the UK bank telex re-

sponses pouring in yesterday were several which included references to the Bank of England's urgent plea for co-operation, expressed on Tuesday by Mr C. W. "Kit" McMahon, deputy governor of the Bank. One telex response indicated the bank's commitment and added: "We are only doing this because the Bank of England asked us to,"

Once the \$5bn of commitments is in place, the IMFs executive board is expected to approve a \$3.8bn three-year package. In addition, M Jacques de Larosiere, the IMF managing director, has primised to seek a further \$2bn of funds from official sources.

David Marsh adds from Paris: The 30 to 40 French banks with Mexican loan exposure of between \$5bn and \$5.5bn are not expected to against. banks and for U.S. bank regulators decide until today how much new who bave been waging an energetic money they will put up.

gently needed, commercial loans.

The Government is looking for at

least \$4bn to meet debt payments

Their new requests will be pre-

sented at a meeting expected to

At the end of yesterday's final round of discussions with the Bra-

zilian authorities, Mr Horst Struck-

team, made an unusual appeal to

international banks to give Brazil

ter nearly three weeks of extensive sphere, said the Brazilian Govern- 12 months to the end of October.

due over the next few weeks and

restore immediate reserves.

from the Fund's Compensatory Fi-nancing Facility. Further assis-tance from the Bank for Interna-of the country's major private cred-

Minister, yesterday confirmed Bra- meyer, the head of the visiting IMF

The IMF agreement, reached al-

trolled by the world's major central the "necessary support."

The hanks, whose action is being coordinated by Societé Générale, bave delayed their decision beyond last night's deadline partly for administrative reasons and partly be-cause they are unsure of the response, particularly of UK and West German banks.

Based on an estimate of \$5bn to \$5.5bn loan exposure, French banks will bave to provide around \$350m to \$400m of new loans. One nationalised bank official said he was "confident that the banks would live up to their responsibilities."

Stewart Fleming writes from Frankfurt: It was unclear yesterday to what extent West German banks bad formally agreed to participate in the new credit for Mexico. It is widely believed that as a member of the advisory group, Deutsche Bank, the largest West German bank, bas set an example by agreeing to parti-

But some banking sources suggest that other leading banks have not met the December 15 deadline. It is assumed that authorisation will ultimately be given in spite of the difficulty some banks see in ad-vancing new credits, part of which will promptly have to be reserved

Argentina's junta struggles to stay alloat, Page 14

Pym pledges flexible Nato arms stance Brazil and IMF in agreement

BY PETER RIDDELL, POLITICAL EDITOR, IN LONDON BY ANDREW WHITLEY IN RIO DE JANEIRO

the Fund," he said.

gotiate the terms.

ment's economic programme was

templating asking for a moratori-

would be cut by between 10 per cent

and 15 per cent next year in real

reduce the rate of money supply

growth to 60 per cent, compared with the 70 per cent recorded in the

Other officials have indicated

prepared to consider Soviet propos-als for reducing intermediate range nuclear forces which fall short of "very coherent." "It will give a good ult and deserves the support of Sr Galveas has reiterated the Government's denial that it is con-

um on debt repayments at the meeting or that it intends to renekey features of the Alliance's nego-Sr Antonio Dellint Netto, the Repring Minister, said on Tuesday tiating position, particularly by comparison with some of the Britthat as part of the IMF package the ish Prime Minister's recent combudgets of the state companies

remained the zero option, under which Nato would abandon completely the deployment of cruise and Pershing II missiles in Europe that the central bank is aiming to in exchange for the dismantling of all Russian SS20, SS4, and SS5-mis-

THE WESTERN Alliance will be "ready to consider any serious ne-

the so-called zero option, Mr Francis Pym, the UK Foreign Secretary, told the House of Commons yesterday. Mr Pym, who was opening a. Commons debate on disarmament,

was generally conciliatory about ments. He said the Alliance's objective

But, be said, the Alliance stood

gotiating offer from the Soviet side. If Soviet demeanour at the last round of negotiations foreshadowed the start of a serious move towards elimination of their SS20s, then this would be a small step in the right direction. In that event, we would, of course, examine it and evaluate

it with the greatest care." Mr Pym refused to go into details about the latest Soviet proposels for disarmament, though he disagreed. with suggestions that Mr Yuri Andropov, the new Soviet leader, had offered to cut by 50 per cent or more the number of SS20 missiles aimed at Western Europe.

He said the Russians had recent-

Ministers on the defensive, Page 6

Santa brings a **Boeing** to Delta

By Paul Betts in New York

THE MANAGEMENT of Delta Airlines, the sixth largest commercial carrier in the U.S., found an unusual and extravegant gift under the Christmas tree yesterday - a brand new Boeing 767 passenger jet liner with a big red velvet ribbon wrapped round its belly and the words "Spirit of Delta" painted on

its nose and fuselage.

The \$30m aircraft - one of Boeing's new generation of jet liners -was a present from Delta's 36,000 employees to thank the company for maintaining a happy family at-mosphere and awarding a general pay rise despite the dire problems of the industry and prospects for more hard times ahead

At what Mrs Harriet Parker, Delta official, described was a "moving, tearful, emotional" ceremony yes terday morning at the company's hangar at Atlanta airport, the employees - who with the exception of the pilots and a few others are not members of a union - offered to Mr David Garrett, company president, the key to the cockpit of the new

....

The state of the s

aircraft. Delta, which has not been spared the troubles of the industry and reported a net loss of \$16m in its latest quarters, has adopted a longterm and fatherly approach to em-ployee relations and has kept every-body happy by resisting all the ob-vious steps other airlines have taken to cut costs at a time of squeeze.

Delta has made no lay-offs. In September, it gave its employees an average wage increase of 8.5 per cent. In return, the employees decided to make Delta a gift of their Mrs Parker said the employees

would be paying for the Boeing 767 through pledges. "The employees have authorised the company to deduct from their pay cheques various percentages ranging from 1 to 5 per cent over various periods of time up to two years," she said. "We've even had some passengers

who have given money to the crew as they left our plane for the 767 project. At first, the company's policy was to refuse these gifts, but then we felt since the passengers really wanted to give we should not disappoint them," Mrs Parker remarked.

Are there any plans for a new gift? "No," an employees' spokesman said. Indeed, in recent months, Delta has been changing its marketing strategy and has had to go in He said the Russians had recent for extensive discounting and ly floated some new ideas, and all of promotional ticketing to keep these had come up before the death | abreast of the competition. In the Continued on Page 16 past, Delta adopted a conservative policy to promotions just as it maintains a conservative approach to

employee relations.

Paris Cabinet rift on S. Africa and Taiwan nuclear order hopes

BY DAVID MARSH IN PARIS

A split in the Government has al-

M Claude Cheysson, the Foreign Minister, has stated his personal opposition to any such contract. This was through a letter to the French anti-apartheid movement, published in the Paris press, in

mestic A-plant sector, which has been disturbed by reports of

around Framatome, part of the Creusot Loire group, and the state-controlled Alsthom Atlantique.

the South Africans' decision to release from jail a dissident Afrikaner poet, Breyten Breytenbach, who which he denied that the Govern-ment was about to authorise any successful interceding hy President Francois Mitterrand. They believe

"important" quantities of fuel.

nuclear industry's parallel efforts to win big power stahon orders from France has recently faced international criticism as a result of its

clear fuel to India. Any agreement with Taiwan will be keenly scrutinised to see whether France makes any fresh

uranium deliveries to Egypt, whose

commercial efforts in other fields in India, notably for arms - hut also to give husiness to the domestic enrichment plants, currently suffering

domestic outlook, is dragging the Government into deep political waters over possible contracts for South Africa and Taiwan

ready emerged over the possibility of providing another nuclear power nlant to South Africa, under a ten-der offer which Pretoria is expected to launch next year.

THE FRENCH nuclear power in- reactors at Koeberg near Cape are now at an "advanced" stage for

planned cutbacks in plant orders, above moral scruples.

The domestic industry is grouped

Industrialists see as significant

It is not certain whether this will bave any detrimental impact on the

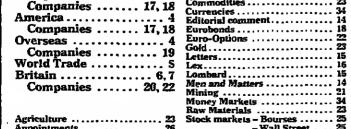
climb down over non-proliferation safeguards on a deal to supply nn-

concessions to promote its role as a reliable supplier of enriched urani-Cogema has also been discussing

Energy Minister visited Paris last week for talks on N-plant orders and financing. The French are keen to sell more uranium abroad not only to back up

Other Ministers, however, including M Michel Jobert (Trade) and M win French favour and clear the Jean-Pierre Chevenement (Indus- way for an N-plant go-ahead. try), who is a strong advocate of nu-clear power, are believed to have a The other potential political trouble spot concerns Taiwan. Cogema. more ambivalent attitude. the state-owned nuclear fuel group. The first French nuclear power has been negotiating for two years order for South Africa signed in to supply enriched uranium to Tai-1978, was for two 900 megawatt pei. The company says that talks from a fall in demand.

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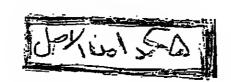
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We take this opportunity to wish our many friends the compliments of the season and best wishes for 1983 ARTHUR BELL & SONS p.l.c. DISTILLERS PERTH SCOTLAND Established 1825 And still an INDEPENDENT Company.



Rift opens in ranks of W. German union

By Stewart Fleming in Frankfurt EVIDENCE of a growing split in the ranks of West Cermany's largest trade nulon, the 2.7m-strong IG Metall, over its forthcoming wage claim emerged yesterday when nnion representetives in the state of Hessen said they were in favour of pressing for a 7 per cent increase.

Earlier this month, the executive board of the union

had recommended as opening elaim of 6.5 per cent.

The decision in the state of Hessen was followed quickly by an announcement from the union's North Rhine Westphalia branch, which covers the depressed Rhur region, that it supported the 6.5 per

cent proposal. Earlier this week, however, union representatives in the state of Baden-Wüerttemberg said they wanted to press for a 7.5 per cent wage rise. There are some 560,000 union members in the state.

Together with the 320,000-strong Hessen branch, repre-sentatives of almost 200,000 union members have now indicated that they disapprove of the nuion leadership's

The executive board meets again on Monday of next week to make the final decision on the union's opening strategy in next year's talks. It is widely expected that the board will decide to stick with

the 6.5 per cent figure.

Union officials dismiss suggestions that the regional decisions in Hessen and Baden-Wüerttemberg represent a challenge to the anthority of the union leadership, arguing that they are an indication of flexibility and democracy within the organi-

Two years ago it is pointed out, Hessen pressed for a higher claim than the executive board was recommending. They add that economic con-ditions in different regions of

the country are reflected in the different claim proposals. They are aware, too, however, that in the last year the authority of the union bureancracy has been weakened and can scarcely relish the prospect of opening wage talks with the employers against the background of disunity within their own

Nicholas Colchester and Jonathan Carr interview the former West German chancellor in Bonn

Schmidt and snuff box retire quietly into the limelight

"WELCOME TO the desert," tive leadership in economic said Herr Helmut Schmidt with matters. Of the last four major an ironic smile, leading the international gatherings, the way into his new office in the International Monetary Fund West German Parliament build-ing in Bonn.

cast, condemned to lonely and dismal meditation. Two months after the parli-

The ex - Chancellor stressed that no one should expect a single a single remedy for the world's economic ills to emerge from these discussions. There was no such wonder-cure.

which swept him from govern-ment, he is sleeping longer, playing more chess, going to the theatre and generally en-joying his private life as he has had little chance to dn for years. Only mention of Herr years. Only mention of Herr Hans Dietrich Genscher — the Free Democrat leader who switched coalinon partners to form the new centre-right government — disturbed Herr Schmidt's equanimity in the course of a two-hour talk. Herr Genscher's conduct clearly still rankles—and if the ex-Chancellor's expression of controlled ferocity is anything to trolled ferocity is anything to go by, it will do so for a long

(IMF) meeting in Toronto had been useful because it opened open useful because it opened many eyes to the problems of gardens bordering the Rhine is arguably more comfortable than his old office in the Chancellery. And Herr Schmidt does not behave like an outcast, condemned to lonely and the Franchisch and the Franchi scemed likely, and the Euro-pean summit in Copenhagen had been neither a clear

hindrance nor a help. The ex-Chancellor and long-standing "Summiteer" stressed, moreover, that while it was good for world leaders to get together and talk, no one should expect

That sald, it was equally true that no single country — not even the United States—could solve its economic problems alone. International economie and financial interdependence had reached a level inconceivable in the 1930s, so that attempted remedies applied in ode country quickly had consequences in another.

The crucial task was to see that economic policy measures were both nationally appropriate and internationally

Complementary.

The role of the IMF should be strengthened, as it was the only institution in a position to tie the necessary conditions to large-scale lending. Last but not least, the aim should be

trolled ferocity is anything to go by, it will do so for a long time yet.

Armed with his inevitable snuff box and a pack of menthol eigarettes on the table, he is more than ready to survey the economic and financial scene in which he is no longer e leading player.

He sees many reasons for the eurrent "dangerous" situation, with low growth, high debt and more than 30m jobless in the OECD area alone.

Could this plight have been availed by stronger and more consistent economic leadership, especially by the United Slates? Herr Schmidt, who has often



'I would like to play the role of Jim Callaghan ... a strong character . . . a dependable human being' —Helmut Schmidt

System had not existed. Herr Schmidt was at his most Eastern Europe—and .to his talks last December near East

Berlin with Herr Erich
Honecker, the East German
leader. Despite fundamental
differences there were clear
parallels of interest between the
two German states. Herr partitles of interest between the two German states. Herr Schmidt said, among them the desire for economic co-operation and the need to preserve peace. After all, Germany would be the battlefield if there were another war in Europe.

"Both East Berlin and Bonn are aware of these parallels," he said, "although there are those in East and West Europe who in East and West Europe who are not at all pleased that this is so. Herr Honecker speaks German, not Russian, and he naturally thinks as a German, ableit as a Communist German," Did this intriguing remark mean Herr Schmidt felt closer to Herr Honecker than to other leaders in the East? The exChancellor avoided a direct answer. He expressed respect especially by the United States? Herr Schmidt, who has often title less dependence on the criticised U.S. economic and financial behaviour in the past, was not prepared to lay all the hlame at Washington's door. Europe had proved incapable of organising itself well enough to provide leadership either, because of "national enotism" meant that from the start the in many countries which had caused major damage.

There was, Herr Schmidt reflected coolly, no real collections and entitle less dependence on the case, and entitle less dependence on the case. So, Herr Honecker speaks is so, H

been still more divergent if the difficulty, has created an atmossians with all their contradic-system had not existed. phere of individual freedom for tions—"Hostile to strangers, his people."

He had also been personally

very close to Mr Edward Gierek, the former Polish leader. "His economic notions seemed to me romantic and naive to say the least. But one thing pleased me very much—and that was the honesty with which has a seemed to me. honesty with which he strove for reconciliation between our two people after more than 200 years of German-Polish con-

had been better able to master this burden from the past than the East Germans. "Although the East Berlin leaders have long since recognised the western border of Poland, they are very worried that they might be drawn into difficulties

sians with all their contradic-tions—"Hostile to strangers, yet at the same time capable of great bospitality. Brotal, but at the same time sentimental. Imperialistic (and don't forget the biggest territorial gains for Russia were made not by the Communists but before, by the Chars) yet full of a yearning for God."

One scene in particular remained clearly in his mind—that banquet speech in the Kremlin in July, 1980, when he had criticised Russia's intervention in Afghanistan and its build-up of intermediate-range nuclear missiles.

nuclear missiles.

"It was the toughest speech
any Western leader has given in
the Kremlin," said Herr Schmidt
with evident pride. "Although

ing the Russian text with a ing the Russian text with a finger. He was clearly shocked. Opposite me sat Leonid Ryich Breshney, also following the text with a finger. But at the end he sood up and clapped—so Suslov had to get up and clap too." After the banquet, the mem-bers of the Polithuro went off into a huddle in the corner of the half—and the German side realised it was time to leave, still with no sign whether the Russians would be prepared to negotiate on the missles with

the West or not.

"The meeting next morning started a bit late—but then it became clear that Brezhnev had got his way and that the Rusians were, after all, ready to Herr Schmidt paused, gazed

It was quite wrong, he said, to pull Communist states into the same basket.

into the distance then added. The effect of my speech was, apparently, very strong."
With that kind of experience With that kind of experience behind him, after eight years as head of government, it would surely be surprising if Herr Schmidt were largely to fade away from the public stage.

"Well gentlemen, you are in for a surprise then. I have done my duty as Minister and Changellor as it came When I had to cellor as it came. When I had to deal with missiles I dealt with missiles. When I had to deal with economic problems I did that too. Now I will do my dity.

—as a Member of Parliament -as a Member of Parlisment (for a Hamburg Constituency)."
He was writing an economic article at present and would later write books. He would not allow himself to be "drafted" either for a national or an international job (there had been some Press suggestions that he might become Nato Secretary General).

General). Had he no regrets when he switched on the TV and saw his successor. Chancellor Heimat Rohl, going through the business of government? The exchancellor countered that he did not watch TV. The problem

In closing, Herr Schmidt did permit himself the revelation of one rather surprising amhition. He would like to play the role of Mr Jim Callagian, the former British Labour Prime

"A good question. Ask him and you'll get my answer." A pause, and then: "He is a strong character, A dependable human being."

Walesa appearance worries authorities

THE POLISH authorities rester day faced a dilemma over Mr Lech Walesa's professed intention to appear in public this afternoon at the monument outside the Gdansk Lenin shippard on the 12th anniversary of demonstrations there. ir Walesa, leader of the banned Solidarity union. Was summaned to the local prosecutor's office yesterday presumably to be warned against taking part in the traditional gathering, but he did not attend, claiming the summons did not arrive in time.

The authorities have not given permission for a gathering at the monument, and have said that the demonstrators will be

They have also issued a velled threat in the form of a communique following an official audit of the finances of the Solidarny branch in Gdansk during which " irregularties " were allegedly discovered.

Peaceful struggle

The communique says that the regional leadership, in effect Mr Walesa is responsible, and the welled hint is that he could face prosecution.

A text of the speech Mr Walesa has said he wants in make of the monument has been made available to journalists.

It is a moderate statement in which Mr Walesa seems to accept the formal dissolution of Solidarity yet urges a legal and peaceful struggle for its aims.

In the speech, he shows the

necessary reverence for the principles of the system when he says "we are not aming to overthrow the authorizes and we accept the political realities created by the world and history," a reference to the Soviet Union next door. He also says that trade unions should "stick to their statute and defend the working class" which is the role that the authorities said Solidarity necessary reverence for the the authorities said Solidarity

had overstepped.

Mr Walesa's four-pronged programme, aims at unlons
eschewing politics, workers
self-management independent for young people.

DAIWA EUROPE

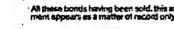
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Police raid

VIENNA — Police have effectively closed down dissi-dent publishing and distribution activities in Budapest in a series of raids. Hungarian dissidents said yesterday. Plain-clothes men confiscated

duplicating machines and un-official publications in sweeps on some six flats in Hungary and other Communist countries,

Police seized all dissident literature found in the flat of architect Laszlo Raik which has been open every Tuesday even-ing for nearly two years for the sale of typed and duplicated copies of reviews, articles rejected by the official media and other documents. Budapest newspapers carried

brief reports on the action, say-ing police had investigated a breach of the Press law and confiscated, illegal duplicating machines and unauthorised pub-Meations.

Hungary urges Comecon reforms HUNGARY has called for "qualitative changes" to be

made in economic relations between the Communist countries at a forthcoming Comecon summit conference. Mr Josef Marjai, the Hun-garian deputy Prime Minister, made his proposal in Moscow, where be met-senior Soviet

Government officials respon-sible for the economy. Hungarian officials said they oped the new Soviet leader, Mr Ynri Andropov, who has shown considerable interest in Hangary's economic reform pro-gramme since his period as

ambassador in Budapest in the 1950s, will be more open to calls for Comecon reforms than his predecessor, the late Mr Speaking at the dedication of

a new Hungarian trade office in Moscow, Mr Marjai said Comecon needed to take a "definite step forward" and must introduce qualitative changes because of the situation of our economies."

expectations for the forth-coming top-level Comecon conference.

ference next year was previously urged by President Gustav Husak, the Czechoslovak leader, but no firm indication was given until now that it would be held: Hungarian officials explained

that the most urgently needed Comecon reform is to turn the transferable rouble into money. The transferable rouble at

present is little more than an eccounting device for clearing bilateral trade between Comecon countries. In the past, Budapest has

frequently urged the creation of a convertible currency for use within Comecon, but has never made a formal proposal to the Communist economic

The lack of a convertible currency in Comecon is seen as one of the main impediments

He said Hungary had high to boosting trade and co operation among its members. A surplus achieved by one Comecon country in trade with another cannot, for example, be used in trade with a third Comecon country, because of able currency.

> This barrier has made the U.S. dollar increasingly important in trade between Communist countries, especially for high - quality manufacturers, energy, and agricultural

energy, and agricultural products, such as meat. The rate of increase in bilateral economic co-operation between Comecon countries has slowed down in recent years because of the priority given to exporting to the West to pay off their heavy debts.
Simultaneously, imports from

most Comecon countries. This has made them more dependent on substitutes from other Comecon members, which, how-



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Marie Const uttiling

Commission orders zinc producers to end 'mutual' help

BY GILES MERRITT IN BRUSSELS

desist from "mutual assistance" pacts, and two of the five companies involved have been heavily fined by

But the Brussels Commission's scribe as a "grey area" of competition distortion in the zinc industry ket-sharing deals that have for 15 coincides ironically with EEC moves to establish a new form of zinc industry cartel that would enurse of the EEC zinc industry. They argued that under Article 85 of the zinc industry cartel that would en-courage the EECs 12 major producers to accelerate their restructuring

Under a scheme that the European Commission is understood to be backing, a "joint closures fund" worth up to \$44m would be set up by the main producers to belp to pay for sbutting at least 150,000 tonnes of excess yearly capacity, equivalent to some 10 per cent of the EECs total installed zincproducing capability.

Members of the proposed clo-sures cartel would all subscribe to the fund and would receive some tect their respective Free \$220 for each tonne of capacity that German domestic markets.

LEADING EUROPEAN zinc pro- was permanently closed. Only the ducers have been given a stern or- French and Beigian Governments der by the European Commission to are believed to be resisting the plan, for fear that their zinc sectors

Commission officials were yester-Brussels for infringing EEC compeday making plain that there was no contradiction between Brussels' support for a closures arrangement action against whal officials de in zinc and its decision to clamp Rome Treaty's competition section, the closures cartel would benefit the consumer, while the various "grey area" practices did not.

would be cut too sharply.

The five companies that have been told they must drop their restrictive practices are Royale Astu-rienne, Rheinisches Zinkwalzwerk, Penarroya, Vielle-Montaigne and Prayon of Belgium. The first two concerns have been fined 400,000 Ecus (European Currency Units) and 500,000 Ecus respectively for operating briefly a system to curb imports that was designed to pro-tect their respective French and

UK steel to benefit from price flexibility

BRITAIN yesterday secured a flexible steel pricing formula from the European Commission intended to prevent UK steel-makers from being hit by the new steel guideline prices that come into force on January I.

The special deal now worked out between the UK and Brussels aims to take account of sterling's volatile level against the Euro-pean Currency Unit (Ecu), which is the basket of EEC currencies on which the prices of the 15 main steel product categories are

The effect of the compromise agreement is that UK strelmakcers, notably the British Steel-Corporation, will in the New Year be able to post domestic prices that are marginally lower than those of their Continental

Had the British Government not won the right to average out the exchange rate between ster-ling and the Ecu over a period of three months, the result would have been that British steel producers' list prices would have been lifted by some 2-3 per cent

Search continues for common coal policy

FROM THE point of view of the my ideas for a coal policy British Government, a new EEC which would help achieve Compolicy which would ease the munity eaergy objectives burden of Loadon's payments to the Community budget and at the same time give a practical gest coal producer."

There is an addendum, as yet the coal producer. EEC membership to Mr Arthur Scargill and his National Union

among most other member states and the easy availability of cheap imports from Australia; Polazd and elsewhere. Today, however. Community Energy Ministers are going to devole five or six hours to talking about nothing else but a coal policy at an informal meeting in Copenhagen. ing in Copenhagen.

The immediate political signi-

ficance of this meeting is that Mrs Margaret Thatcher, the British Prime Minister, bas de-British Prime Minister, bas decided to make coal something EEC budget balance and ought of a test case of the intentions of Britain's EEC partners. Her message has been forcefully lobbied home in EEC capitals over the last few days and it goes something like this: "You also wants to be helpful, having produced a report earlier and other Community governments keep telling me that I must wait for and, indeed, encourage the development of new EEC policies in order to secure, a permanent solution to the problem of Britain's budget payments. Very well, here are

unspoken, saying that if Britain's partners do not redevoutly to be wished.

A common coal policy has for years seemed a factasy given the lack of interest among most other member states and the easy availability of characters. as long as is necessary to relain the system of special relates Mr John Moore, Britain's Parliamentary Under Secretary for Energy, will not be alone in arguing the case for coal in

Copenhagen today. Copenhagen today.

West Germany, the second largest producer with an output last year of 95.5m tonnes, is generally sympathetic and certainly anxious to maintain an existing subsidy on coking coal. Bonn is also worried about its EEC budget balance and ought to welcome a policy which could directly benefit its troubled coal industry.

Etienne Davignon · indefatigable

of Community concern. The Community's overall aim is less dependence on imported energy. particularly oil, and the Commission suggests Minister might want to consider spending more EEC money on the production and distribution of coal, lignita

The British have been more specific and tabled six "desirable" elements for an EEC

and peat.

per cent of total consumption in the Ten, Whitehall sceepts domestic UK production is likely to fall over the next decade—a possibility which Mr scargill has selzed upon and is determined to resist. Britain mants to see special retraining and other social aid measures to help cope with redundancies.

• EEC support for cyclically

be no help at all to the UK unless everyone sgrees that it should be financed out of the general EEC budget, as distinct from the Coal and Steel Community budget which is much smaller and financed by levies on the two industries and by direct government contributions. However, the British and the Commission would be pre-· EEC support for cyclically high pithead stocks. These and to security of supplies, but are

expensive to maintain.

Environmental measures.
encouraged by the Community. o deal with the impact of coal mining,

More transparent pricing to ensure that cool is sold to con-sumers at prevailing merkel

developments so as to encourage consumption.

Ryen if all Britain's partners were to embrace this programme today, it would be unlikely ever to yield more than a modest contribution to reduc-

osred to argue that the general budget is there to finance Com-munity policies and energy is undoubtedly one of those.

The attitude taken today by the Energy Commissioner, the indefatigable Viscount Etienne Davignon, could be of singular importance. If he puts his considerable negotiating talents sumers at prevailing market rates—the British have doubts about price levels in Germany. Belgium and France.

Community aids for infrastructural and coal handling developments to as to encourage consumption.

Even if all Britam's partners were to embrace this programme today, it would be siderable negotiating talents hehind the search for a coal policy. Then real progress is possible over the next few months. Its importance in relation to the British budget problem will not have escaped M Davignon particularly at a time when the European Partiament is loudly demanding policy solutions to the British budget problem will not have escaped M Davignon particularly at a time when the European Partiament is loudly demanding policy and not rebates linked question and not rebates linked to "phoney" spending pro-

specific and tabled six "desirable" elements for an EEC coal policy:

Payment by the Community of interest rate subsidies an investment in economic coal production.

Community aid for restructuring the coal industry. With imports new occounting for 23

modest contribution to reduction to reduction and modest contribution to reduction to redu grammes.

French inflation accelerates but remains on target for year

BY DAVID HOUSEGO IN PARIS

THE FRENCH inflation rate accelerated in November after the end of

the four-month price freeze.

According to provisional figures released yesterday, prices rose 1 per cent in November compared with a cumulative 1.5 per cent during the July-October period. Over the 12 months to the end of November, prices bave thus risea 9.4 per

The sbarper increase in November reflects tha rise in prices of a number of products for which increases were permitted at the end of the freeze. These included cars, clothing, food items and certain public tariffs, including the railways and the Paris Metro.

government regulation over a wide-area, keeping the "nominal" rate of inflation below the "true" rate. La, tent inflationary pressures in the economy are partly reflected in large deficits run up by public-sector cornorations.

sector corporations.

None the less, the Government now seems assured of achieving its

we want to stay British" from Gi-

braltarians crowded behind police The Spanish gates, shut in 1969

ist Government, for "humanitarian reasons". But a political row erupt-ed when Sir Joshua Hassan, Gibral-

tar's Chief Minister, said be was disappointed at the British Govern-

bours every day in retaliation for Spaia restricting border crossings

to Spaniards, Gibraltarians and British resideats in the colony.

About 70 Gibraltarians and Brit-

open 24 bours a day.



M. Jacques Delors

months ahead inflation should also benefit from a slowdown in prices worldwide and from the fall in the

low 10 per cent for the year. The cumulative increase for the first 11 inflationary momentum, M Jacques er than in the same period last months is 8.6 per cent, and in the Delors, the Minister of Fluance, has year.

Sr Joseph Ojeda, 56, a Spanish electrician who works in Gibraltar, said he was going to see his family which be had not been able to af-

the gates and the only way off the rock was across the Straits of Gi-

braltar to Tangier by boat or plane:

could not even telephone Spain and

From La Linea, on the Spanish side, police said 102 people crossed

into Gibraltar in the first half-hour

of the border being opened.

Gibraltar's gates open

to pro-British clamour

by Franco to press Spain's claim to sovereignty over the coloay, were opened at one minute past midnight spain is out and that the Socialists

on the order of Spain's new Socialist Government, for "humanitarian reasons". But a political row erupt and hearses were allowed through

ment's decision to keep its gates Until five years ago Gibraltarians

Gibraitar's Council of Ministers divided families were forced to said they should be closed for four shout news through the gates.

Reuter

next year will be tighter than this, when a 12% to 13% per cent target was set. The new norm is expected to be close to 10 per cent, in line with the Government's aim of an 8 per cent inflation rate.

neasures taken since the devaluation of the franc in June has been end of the year and into 1983.

The slowdown is not yet being reflected in an increase in bank-

Shultz call for Spain to stay.

MADRID - Mr George Shultz, the U.S. Secretary of State, told Spain's new Socialist Govern-ment yesterday that he hoped Spain would decide to remain in-the North Atlantic Treaty Orga-

Mr Shultz arrived in Madrid earlier in the day on the next to last step of his two-week tour of European capitals. He is due in

"A major effort here it to sort of tip our hats to the fact that the seems to be growing and we are very supportive of it." AP

The impact of the deflationary

further demonstrated in the latest Bank of France inquiry into busi-ness activity, published yesterday. This shows that industry anti-cipates continued stagnation at the An important factor in this, the Bank of France says, is the fall in export orders, particularly from the

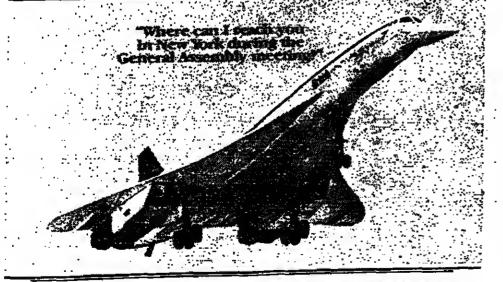
ruptcies. According to new figures, also published yesterday, the number of companies going bankrupt fell marginally on a seasonally adjusted basis to 1,714 from 1,825 in

During the first 11 months of the

within Nato GIBRALTAR - The gates which cut off the British rock colony of Gibraftar from Spain for 13 years swung open yesterday to shouts of superior ing impatiently to be let through.

cialist Government, the Reagan Administration clearly hopes to maintain the same good rela-tions it had with the previous Government. Mr Shultz said his visit here was intendend "to sup-

cratic tradition in Spain



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On 16th January, 1983 there will become due and payable upon each Bond drawn for redemption, the principal amount thereof, together with accrued interest to said date at the office of .— S.G. WARBURG & CO. LTD., 30, Gresham Street, London, EC2P 2EB,

Interest will coase to eccue on the Bonds called for redemption on and after 15th January, 1983 and Bonds so presented for payment must have attached all coupons maturing after that date.

U.S.535.000.000 nominal amount of Bonds will remain outstanding after 15th January, 1983.

30, Grasham Street, London, EC2P 2EB .

16th December, 1982

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Regan supports Fed policy as industrial production sinks

BY ANATOLE KALETSKY IN WASHINGTON

AMID further indications thet cetions to date that the Reagan the U.S. economy is sinking still Administration, like the Central deeper into recession, the Rea-gan administration expressed and foremost with promoting unqualified support yesterday for the Federal Reserve Board's and reflate the economy.

Mr Donald Regan, the Trea-sury Scoretary, praised the Fed for easing monetary policy and deliberately encouraging in-terest rates to drop.

He said that the Fed's governors, who decided to cut the discount rate to 8.5 per

cent on Monday despite the ab-sence of any downward market pressure on interest rates, were clearly signalling that "they would like to see lower interest

But far from repeating any of his previous strictures about the dangers of monetary retaxation and the need to focus policy on monetary targets rather than interest rates, the Treasury secretary predicted that the Fed's actions would lead to further falls in interest rates in "the next several months." In a wide-ranging interview vesterday he dismissed suggestions that the Fed's easing threatened ro reignite inflation.
Mr Regan's comments pro-

economic recovery. The fight worries about the dangers of a more relaxed policy are now confined to the impact such n policy could have on market expectations.

Industrial production figures published yesterday showed an 0.4 per cent fall during November, after 0.8 per cent declines in the previous two months.

The figures underlined the reasons for the Administra-tion's growing anxiety about a recovery. Within the 0.4 per cent fall in overall industrial production reported for Novem-ber, all the main industrial categories declined, with the exception of defence and space equipment

A slight unturn in consumer goods output during October was reversed. Investment goods production continues to fall rapidly. Surveys of investment intentions published last week by the Commerce Department showed that investment is likely to fall further in the vided one of the clearest indi- next six months.

Teamster chief convicted of conspiracy to bribe

MR ROY WILLIAMS. President of the International Brother-hood of Teamsters, the huge and powerful trucking industry mr Williams and the four and powerful trucking industry and transport union, was convicted yesterday by a federal jury in Chicago of conspiring to

hribe a U.S. senator.

The jury also convicted four other teamster union related co-defendants on charges of conspiracy, fraul end interstate travel in altempt to bribe Nevada Senator Howard Cannon, a Democrat, to help pre-veot legislation to deregulate U.S. trucking industry. Indicted. The defendants will he sentenced on January 10,

The elaborate bribery schema O'Maley, a Teamster involved an offer to Senator fund trustee and

other defendants each face a possible possible five-year prison sentence and \$10,000 in fines on each of the 11 counts on which

they were tried.
The other defendants Include Mr Allen Dorfman, a millionaire Chicago insurance executive Chicago insurance executive, Mr Joseph "Jocy the Clown" Lombardo, a reputed mobster and said to be e liaison agent with the Teamsters for the Chicago crime syndicate, Mr Andrew Masse, a part-time employee of the Teamsters pension fund, and Mr Thomas O'Mailes a Teamster pension Cannon to obtain the exclusive Chicago police officer,

New U.S. high-yield account launched

RESERVE Management Company, the financial services group which ploneered the money market fund in the U.S., and Mellon Bank, the 15th largest U.S. bank, yester-day lannebed the latest in a growing number of highy-ling asset management accounts with full chequebook facilities.
The new account, called

reserve cash performance account, is RMC's entry into a market dominated by Merrill Lynch's cash manage-ment account launched five years age.

Mellon will provide proces-sing services for the new account which will be marketed directly and through 137 regional brokers in the U.S. The new account requires an initial customer deposit ni \$10,000, comes with Visa and/

nr Mastercharge cards which can be used to debit the account, a minimum \$2,000 credit line and unlimited cheque book facilities for an annual fee of \$50. The ne-count also untomatically transfers, nr "sweeps" uvail-able cash from n enstomer's brokerage account into the

Deposits in the reserve ac-count will initially be in-vested through a money mar-ket mutual fund in govern-

As such, the account could be a strong competitor to the high interest insured and limited current accounts launched by the U.S. banks earlier this week

Mr Bruce Kent, general partner of BMC, said: "Reserve CPA will appeal to brokers deciding not in develope their own asset management accounts or preferring not to invest through large brokerage firms with whom they complete."

Asset management accounts bave grown increasingly popular in the U.S. with wealthy investors of the esti-majed 1.1m accounts Merrill Lynch, the Wall Street fin-ancial services group, has al-most 900,000 accounts with about \$20hn in them Merrill, which has tried to patent its account, has been followed into the market by a growcial services companies

Paul Betts follows the ups and downs of a British retailer's U.S. ventures

Conran gambles on New York's 'singles'

MR TERENCE CONRAN is a boom in divorce. These are taking another calculated gamble in the U.S.—a market but they all help our business."

The single apartment represents sents a hig market for Mr Contains entrepreneur opened his first store in the U.S. five years ago. The latest venture is a new store—Mr Conran's was going to be one of the boom. is a new store—Mr Conran's eighth in the U.S.—that just appened in the unusual location said.

If this does indeed turn out of Astor Place in the so-called to be the case, he could not have Vitiage district of Manhattan.

was going to be one of the boom areas for retailing," Mr Conran

furnishings business in the U.S. is now profitable for the first

we had a European trading philosophy; you know, a sort of sustere idea about honest trading. Well we had to drop this and adapt to American principles of sale, sale, sale, crease advertising spending. After a difficult start, we have Vitiage district of Manhattan.

The shop is on the dividing line between the "East Village," once the bome of the bippies, and "Greenwich Village." former home of the beatniks. By opening in this New York neighbourhood, Mr Conran is in a sense breaking new ground. What is more, it is at a fine when most retailers in the U.S. are cutting back or closing "Ob. I think we will do very well," Mr Conran remarked over a cutting back or closing "Ob. I think we will do very well," Mr Conran remarked over a cutting the last five years there bote i overlooking Central Park. "During the last five years there bas been a fairly massive change in the style of life in the U.S. there are a great deal more single apartments, there is a boom in homosexuality, and it is a to be the case, he could not have picked a better spot than the village, to be the case, he could not have picked a better spot than the village, is transformative the beginning of this year."

It this does indeed turn out have picked a better spot than the the been trading profitably since the beginning of this year."

Mr Conran plans to expend the beginning of this year."

Mr Conran plans to expend the beginning of this year."

Mr Conran plans to expend the beginning of this year."

Mr Conran plans to expend the beginning of this year."

Mr Conran plans to expend the beginning of this year."

Mr Conran plans to expend the beginning of this year."

Mr Conran bas concentrated exclusively in the exorem in the U.S. notably the New York and Garden dwellings complete with rubber plants and derelict to of the U.S., notably the New York and Garden dwellings complete with rubber plants and kelim rugs.

Mr Conran appears to be finally getting his act together in the U.S. (these operations none-theless showed a trailing loss of £278,000 for the 12 months bear trailers the bean in publicity. We were a £278,000 for the U.S. notably the New York and the proposition of this year."

Mr Conran appears to be finally getting his act together in the bome furnishing appears of the



Terence Conran . . . nptimistic

products for the mother and the young child, merged with Mr Conran's Habitat group at the beginning of this year. Motherware, which has 200 stores in the U.S. lost about film from its U.S. aperations

year. "It is really odd how a man like Selim Zilkha could have made so many mistakes in the U.S. end of the business," Mr Conran said, referring to the entrepreneur who built Mothercare but who has now broken all ties with the succes

ful company he founded. "The problem with the U.S. business was that they wer offering nothing but dull me chandise in the stores. The went downmarket and they did the same mistake but to e lesser extent in the UK and forgot the middle class market, and forgot dealing with a young family aspirational group of

Mr Conran is optimistic abou the long-term potential of the U.S. market. "We see it as a vast market, parallel to the whole of Europe. It is a very difficult one which, when you get it right, brings great rewards. We don't look at our investment here as a shelter. The French do. They are all looking at the U.S. as n way of running away from Mitterrand. They are overreacting.
And we are not running away
from Mrs Thatcher."

Concern over Surinam's future

BY WALTER ELLIS IN AMSTERDAM

Guyanas. Last week's upsurge of violence by the armed forces resulted in former sergeant from the Netherlands alone, and (now Lt.-Colonel) Daysi Bon 2 further \$870m at least had terse consolidating power. It been promised over the next bas also caused the deaths of three years. American aid this around 40 prominent opponents year should amount to only of the new regime and provoked \$1.5m, and cash from the EEC immense anxiety among the between 1979 and 1984 was to population.

And it has focused the attendon of the Netherlands and, through it, the European com-munity and the U.S. on a state that is rapidly being turned into

The Netherlands, as the former colonial power, has with-drawn its economically vital aid to Surinam. Mr George Shultz, the U.S. Secretary of State, has said that Washington may well do the same, and the foreign ministers of the EEC, although delaying any action, have expressed their "serious

SURINAM has perhaps slum-plight than it is today. The consistently to prevent Cohan-bered too long in th tropical economy depends on outside sponsored communism from heat and obscurity of the financial assistance. Since inde-taking root in the South pendence in 1975, the country bas been in receipt of \$630m between 1979 and 1984 was to bave reached nearly \$17.5m.

> The question now is whether Col Bouterse can replace his Dutch benefactors, or whether he will be forced to restore a measure of civilian government to the country.

Should be remain in power and decide to resist the Dutch, the question then becomes to which foreign power he might look to fill the vacuum. U.S. State Department officials

said last weekend during a visit to The Hague by Mr Shultz that although delaying any action, there was concern in Washing-have expressed their "serious ton that an embattled Col concern." Bouterse might revive old con-Without aid, Surinam would be in an even more desperate alarm the U.S., which has acted

sponsored communism from taking root in the South American mainland. Col Bouterse himself claims that he wants to establish a purely Surinamese form of socialism linked to neither East nor West. He dismissed the of President Henk China Sen last February and, after putting

down an attempted coup in March installed a new regime under Mr Henry Neyhorst.

Things did not go well, however, as large numbers of demonstrators called for a more demonstrators. democratic, less doctrinaire form of government, and last week the army mounted a puni-tive raid on the offices of the leading trade union, Moeder-hond, two independent radio stations and a newspaper critical of the regime.

The Colonel said that an attempted coup had been mounted by the "rich economie elite," and as many as 40 of his enemies were shot dead while allegedly escaping from army



simmering for much of this year amid claims by Col Bouterse of conspiracy against his regime at bome and abroad. In The Netherlands, the events in Surinam have dominated the news for the last week. There are nearly 200,000 Surinamese in The Netherlands, a lobby which, in times of stress, can mobilise thousands of people on the streets of The Hague. This compares with 350,000 who elected to remain a Strivent and face to remain. in Surinam and face an uncer-

Fall in U.S. paper production

By Paul Taylor in New York U.S. PAPER and paperboard production dropped 45 per cent

to 50.8m tons this year, the American Paper Institute Mr Louis Laun, presidem of the association, presenting the industry's and of year state-ment, said that production had

reached a low point in mid-year but bad showed a small recovery this autumn.

The report reveals that printing and writing papers fell by just I per cent to an estimated 15.7m tons over the previous year, a performance aided by stronger than expected news print consumption.

Paperboard demand. more closely reflects industrial production, fell by 6 per cent with paper packaging grades also showing a 6 per cent decline. Wood pulp production declined in line with reduced domestic and export require-ment to an estimated 49m tons, Production of market pulp fell by about 10 per cent in 5.6m tons

OVERSEAS NEWS

One year after annexation, life on the Golan Heights is back to normal, writes David Lennon

Golan Druze come to terms with Israeli rule

THERE WAS international uproer when Israel nunexed the Golan Heights a year ago this week. The Syrians threatened the UN General Assembly issued a condemnation, and the Arab Druze residents of the former Syrian territory went on

Today it is a forgotten event, and life on the Heighls, which loom 3,000 ft over the See of Galilee and northern Israel, Is completely normal. New settle-ments are being built, others expanded, and the Druze Arabs bave ended their protest.

The Israell invasion of Lebanon pushed the story out of the news and also effectively ended the six-month-lone strike by the 14.000 Druze residents against the anoexagon and the identify cards issued by the Israeli Ministry of the Interior. there in Majdal Shams, on the snowy slopes of Mount Hermon, life has returned to the placid ways of a remote mountain town. The threatening crowds in the main square, wh rocked my car when I visited the town the day after annexa-

tion, have gone.
Instead, the group of young men in the main square are friendly and talkative. They frankly admit that their strike against annexation and the issuing of Israeli civilian identity cards had fizzled out.
"We were running out of food. People have to feed their



families and we were reduced

to giving the babies water and sugar as substitutes for milk,"

explained 19-year-old Mr Aiemn

Abu Saleh, "Then the war in Lebanon came and the Israelia

ignored us and our protests."

The strike, which had begun as a protest against annexation,

might have ended much earlier

but for Israel's ill-judged handling of the situation. First,

it tried to force the residents

to take civillan identity cards

to replace those issued by the military government which had

administered the Gotan since the Heights were captured from

the Syrians in 1967. Then it

exacerbated matters by arrest-

ing a number of the Druze

Public sector workers threaten strike

ISRAEL'S 400,000 public sector workers are threaten-ing to strike from today if no agreement is reached on a new wage agreement, writes David Lennon in Tel Aviv. Last week public sector workers staged n two-day warning strike which paralysed Government operatinus. Unions representing the workers say this time the strike will be unlimited in

The Druze are a religinus sect

which split from Islam in the 11th century and most of them

live in Syria and Lebanon.
There is also a small community in Israel which was recently in the news because of their concern over the state of the Druze in Lebanon.

The Golan Druze live in four

villages at the northern end of

the Heights and their main

The Treasury and the Histadrut Labour Federation were holding intensive last-minute negotiations yesterday in an attempt to avert the

The Treasury has effered the workers an 3 to 9 per cent wage increase, but the unions are demanding an average 12 per cent rise.
Mr Yorum Aridor, the
Finance Minister, has warned
the unions that if they do not

Syrians that they were still loyal citizens of Damascus.

Abn Saleh, Mayor of Majdal Shams for the past eight years.

and Mr Alemn Abu Saleh's uncle, explained that most of

accept the Government's offer. . he will introduce legislation to guarantee workers' real wages and dispense with col-lective bargaining.

The trade unions have responded by accusing the minister of dictatorial minister behaviour.

The clash between the Finance Minister and the Histadrut is part of an attempt by Mr Aridor to curb

the power of the Histadrut annexation, if only to show the Israeli Interior Ministry 90 per cent of the Golan Druze have accepted the cards.

It was the question of their

Arab identity which beloed to prolong the refusal to accept soon, agrees with this. "Most Israeli identity cards. Mr Haye!" people have accepted the cards, will hava: them. We have no Israel or travel abroad you must the protesters wanted the word necept the identity card."

"Arab" noted on their identity card. "The nationality entry on This niso underscores the reality that Israel is likely to what would bappen to them if the card simply says "Druze." hold the Golan for decades to the Golan reverted to Syria. Though most of them appear to be well satisfied with the improvements of their standard of living under Israeli rule, they felt they had to protest at the

Runeitra, the former capital of the Heights, which now lies a broken ruin in the de-militarised zone between the Israeli and Syrian borders.

The face of the dull and in hospitable rocky basait plateau is gradually being changed by the Israeli settlers who live in 32 new villages. Huge tracts of the 700 square mile area have been cleared for crops, especi-ally in the southern half.

Mr. Shimon Sheaves, chair-man of the Golan Settlements Committee, did not think a year ago that the Ameration Bill would have much practical effect upon the 7,000-plus Jewish settlers who began moving there after. The 1967

Looking at the Golan today, however, one is struck by the stretches of improved roads, the teams of workers laying new pipelines and the expansion of the settlements where the quality of the housing is chang-ing from the rudimentary prefab buts to modern two-storey

So, despite international and

Zimbabwe fuel supply fears grow in wake of attack on Beira

BY TONY HAWKINS IN HARARE

ZIMBABWE officials flew to the ZIMBABWE omciais new to the Mozambique port of Beira yesterday to carry out their own assessment of the damage suffered by the oil tank farm complex attacked by Mozambique Resistance Movement (BRM) saboteurs last week.

The Zimbabwe Government is still withholding comment on the seriousness of the fuel supply position, but according to some observers it is the most serious since independence two

and n hulf years ago.

Reports from Beira say e total of 41 tanks were destroyed in the ettack which also extensively damaged the feeder system of oil pipes from the BP complex to the main Belra-Mutare oil pipeline.

The tanks destroyed include

some owned by BP (Zimbabwe) and some owned by the Mozambique Development Corporation. The MRM, in claiming responsibility for the attack, said the oil depot had been attacked in retaliation against the Zimbab-wean decision to send troops to Mozambique to defend not just the oil pipeline but also the two railway lines from Zimbabwe to the ports of Beira and Maputo. The Maputo line has been the target of frequent attacks and as a result Zimbabwean exporters are increasingly using either the South African port of Durban or routeing their traffic through Komatipoort in

South Africa to Maputo.

With the government withholding comment on the fuel supply position, it is very diffi-cult to assess its seriousness. Some observers say Zimbahwe is down to 16 days of fuel reserves and that as a result South Africa has been asked to send emergency supplies from its Sasol oil-from-coal plant.

The fact that the supply position is better in Bulawayo than in Harare where motorists are queueing for two or three bours for petrol suggests South African supplies may already-be serving Bulawayo and the western half of Zimbabwe.
Motorists said yesterday that
there was no fuel av lable at
garages in Mutare or on the road from Mutare to Harare on Tuesday.

According to industricists It will take at least until the end nf this month to repair the feeder pipes at the Bara complex and no oil will come through the pipeline until January 3. This means that Zimbabwe must now draw supplies from South Africa or by rail from either Belra nr.

The cost of the damage to the tank farm and distribution complex is put at Z85m (£3.4m). The crisis has come at a bad moment for Zimbahwe coincid-ing with the onset of the rainy ng with the onset of the rainy season when diesel demand for ploughing and planting is at its peak and also when many private motorists are making boliday trips.

The crisis also emphasises the extent to which Zimbabwe's economy is vulnerable to action by South Africa nr her allies. Oil industry officials said in London lar hight that It would take almost a year to restore the depot to full working order. in the meantime, BP is under-stood to be considering impro-

vising short-term repairs.

One alternative would be to pump oil directly from a tanker into the pipeline. The officials said a "large proportion" of the 100,000-tonne depot had been destroyed. destroyed.

Business confidence falls

BUSINESS, confidence in carried out in April last year, in the last six months, according to a survey of 112 leading industrialists carried out by the Depertment of Business Studies at the University of Zimbabwe.

The survey, which is nublished today, says that 77 per cent of respondants are less optimistic now than six months

go. decline in domestic and export When the first survey was demand, although the survey

Zimbabwe has declined further, the ratio was only 23 per cent Less than 5 per cent of the sample say they ere more optimistic than aix months ago.

The main reason for the gloom is the cut in foreign currency allocations which more than 71 per cent of the sample say is adversely affecting production.
Other problems include the

North Yemen earthquake toll climbs to 2,000

BY PATRICK COCKBURN

MORE THAN 2,000 people have been killed in the earthquake in North Yemen, according to officials in Sanaa. The state radio said 19 villages had been completely destroyed, 101 had heen 70 per cent damaged and more than 40 had suffered 30 from Saudi Arabia. Some 16 per cent damage.

mountainous Dhamar region 60 miles south of the capital is still accurate figures for the number

mally suffer from earthquakes, is clear.

but the country's numerous villages, frequently located on mountain lops to maximise the use of fertaile land, are very vulnerable to natural disasters.

International aid has been reaching North Yemen, mainly aircraft arrived from Saudi The search for bodies in the Arabia on Tuesday carrying supplies for the victims. Civen the very difficult terrain in the North Yemeni mountains and uncertain communications it is likely to be some time before North Yemen does not not the full extent of the disaster

Plan 'to annex Afghanistan'

An Afghan secret police chief has defected to Pakistan and told the anthorities there the late Soviet leader, Mr Leonid Brezhnev, once planned to annex his country, the BBC said yesterday.

The BBC radio World Service said Lieutenant-General Gbnlan Siddiq Miraki, deputy head of the Afghan secret police, said that Mr Bahrak Karmal, the Afghan leader, planned to calt in more Soviet troops because of an "Imperialist threat" and finally announce that the country was becoming part of

the Soviet Union. The plan was ahandoned hecause of opposition within ruting party

Indian troops patrol riot city

in patralling the western city of Baroda after the latest outbreak The army was called in on

Tuesday night after a day which saw rampaging mobs setting fire n houses, shops and buses. One person was stabled to death as the violence simmered during the night, police said. At least 40 people have been injured in the disturbances. Yesterday the troops and police maintained a right grip on the textile and agricultural centre some 500 miles sonth-west of New Delhi.

The heavy

Trouble fuelled by Hindnand after the latest of the latest of the violence between Hindus Moslem tension flared after and Moslems which bas now. Baroda police commissioner claimed at least 11 lives. Jaspal Singh was transferred The army was called in on from the city following Moslem allegations of police atrocities. Since the violence began, olice have opened fire to con-

trol rloting crowds. Police director-general P. N. Writer said that on Tuesday they had fired more than 45 rounds and used 185 teargus shells. Two burnt-out buses yesterday stood in the city market where smoke still ruse from several houses, huts, shops and hand-cars that had been set ablaze patrolling vesterday, residents said.

NEW DELHI — Indian army no new major outbreaks. An Gujarat state, said 400 additroops joined police yesterday indefinite curiew was imposed tional police, heavily armed, in patralling the western city of in parts of Baroda on Monday. and everything necessary was being done to restore order.

Anti-trust deal

THREE U.S. forest products groups - Weyerhaneser, Georgia-Pacific and William-ette Industries, which were co-defendants in a classaction anti-trust suit filed in 1973-have reached an oral agreement in principle to settle the case, currently before the U.S. Supreme Conrt, writes Our Pinancial

appeared to have been effective. Mr Prabodh Rawal, the Home with police at midday reporting. Affairs Minister for Western

A high price is being paid to keep some yards busy, Richard Cowper reports

مكذا من المعلى

ingles,

Iran asks Seoul to help finish Bandar Khomeini project

THE GOVERNMENT of Iran has approached South Korea for assistance in completing the war-damaged petrochemical facility at Bandar Khomeini.

This has been disclosed by officials of Mitsul, the leading membar of the Japanese con-sortium, the Iran Chemical Development Corporation (ICDC), which is involved in the project with Iran's National Petro-

The officials were unable to shed further light on the nature of the Iranian approach, but they doubted whether any constraint including Morea government, including Korea, would either be willing or able to respond positively.

ICDC's position, freemently stated over the last year, is that Bandar Khomelni is no longer feasible as originally conceived. The single, and huse, option would be for Iran to take it over as a national project, providing all future finance, and completely underwriting any future foreign in-

This would be a daunting proposition. No precise esti-mates of the extent of the damage inflicted by six major bombing raids on the site by the Iraqi air force exist. The project, was 85 per cent complete at the time, but damage is assumed to be severe.

In addition, the refinery at operating budget has risen to Abadan, which was to supply Y1,000bn. But even this, in the naphtha, was destroyed by Iraqi. Japanese view, is guesswork.

air raids. Iran has subsequently asid. It can provide some lead stock from other sources, but Japanese officials doubt that supplies for a facility as sophisticated as Bandar. Khomeini, with 13 Historent petroleum derivatives planned, are available.

Japanese workers were evacuated from the site in 1980 and none have petitized. However, a Japanese technical team has been in Teitral since October on a sizewomin project to assist in assessing if the project has any hopes of a second start.

The president of ICDC, Mr Karoku Yamagachi, is in Tehran this week for a progress report and to negotiate with the Iranian authorities.

But Mr Yamaguchl's basic position remains that resumption would only be possible under four escalating conditions: the end of the war, return to normality in Iran itself (meaning certain freedom from the civil unrest, that prompted the first evacuation of Japanese personnel in 1979), restoration of infrastructural services, including airline flights, and finally, and cuitically, the Iranian guarantee to foot the entire bill.

As a working hasis for the continuing negotiations with Iran, it is being assumed that the original Y750bn (£19hn) operating budget has risen to Y1,000bn. But even this, in the

South Korea shipbuilders feel chill winds

SOUTH KOREA is beginning to pay the penalty as well as reap-ing the rewards for its aggres-SOUTH KOREA'S SHIPYARDS (million gress registered tonner) sive and expansionary foray into world shipbuilding. Its ship exports this year will be almost double the 1981 total in value, but company officials say the order outlook is bleak and some admit to having paid a high price in terms of profit-ability to keep yards relatively 782"
Forecast based on first 10 months.
Source: Korean Ministry of Commerce
and Industry busy.
In the last balf decade or so:

South Keres has undertaken a huge expansion of its shipbuilding and repairing capacity, rapidly propelling it into the position of the world's second largest shipbuilden after Japan, with over 9 per cent of the major U.S. deal which has prevented a much larger drop.
Mr. Chung Tae Sung, shipbuilding director at the Commerce and Industry Ministry.

with over 9 per cent of the merce and Industry Ministry.

This expansion, coupled with the country's aggressive pricing the latter part of next year, but the country's aggressive pricing the latter part of next year, but the country's aggressive pricing the latter part of next year, but the country's aggressive pricing the latter part of next year, but the country's aggressive pricing the latter part of next year, but the country's aggressive pricing the latter part of next year, but the country's aggress that the outlook for 1984 is decrease in the new order book for 1983. We did well this year in numbers, but the financial conditions and the prices in this beautiful the country's biggest ship conditions and the prices in this beautiful the country's production, and says if is expecting to make a loss this year.

New orders byon by South.

New orders byon by South.

Korea's shipbuilders in the first starker if it were not for Daewoo of 1882 are down by Shipbuilding and Heavy Interest the could be even that new export deliveries should total around \$1.7bn (21.96bn).

The outlook would be even starker if it were not for Daewoo of Shipbuilding and Heavy Interest the country's order for 14 large content that the prices of the country's order for 14 large content that the prices of the country is the first starker if it were not for Daewoo of the country is the first starker if it were not for Daewoo of the country is the first starker if it were not for Daewoo of the country is the first starker if it were not for Daewoo of the country is the first starker if it were not for Daewoo of the country is the first starker if it were not for 14 large content the country is the first starker if it were not for 14 large content the country is the first starker if it were not for 14 large content the country is the first starker if it were not for 14 large content the country is the first starker if it were not for 14 large content the country is the first the outlook would be even that the country is the first price.

April, but promptly ran into finencing problems. These eppear to have been largely solved, and late last month the Government gave the go-shead, in principle, for the deal. Without it Daewoo's massive \$500m new shipyard at Okpo, opened only last year, would be working at less than 50 per

cent of capacity in 1983. Mr H. K. Chae, managing irector of Daewoo, says: "In director of Daewoo, says: "In 1988 there will be very few yards that will make a profit. Next year all the yards will compete just to survive. Every yard is in the same state, Our life-line is the 14-sblp container

Perbaps the hardest hit has been South Korea's premier shipbuilder Rymdai. Last year the company exported \$600m-worth of ships and built 907,000 gross tonnes of ships (almost 80 per cent of the country's total output).

This year, it will do even better, exporting over \$1hn worth of orders.

Only last month the company's hipo dockyard launched four new ship repairing dry docks costing around \$132m to boost dock capacity to 2.15m

docks costing around \$132m to boost dock capacity to 2.15m

But despite the expansion and the record output, gloom, perhaps even a bint of despera-tion, now appears to be affecting the company's senior managers. Mr Y. H. Cho, the senior

business gained in previous months and the total foreign order book was still well down on last year, Andrew Fisher reports. New foreign orders in the first eight months of the current fiscal year to end-March 1983 were down by 44 per cent from

3.56m gross tons to 1.98m tons.
The November figure was up from 321,550 tons last year to 583,200 tons, but this year's figure included nine ships mistakenly left out of the September and October totals.
The Japan Ship Exporters' Association (JSEA) said this was the first time export contract figures were higher than delivery levels. But the omissions from earlier months meant this did not indicate any improving trend.

sales department says: "We did well to make a profit in 1981. We won't do so this year. I doubt whether we'll get back maintain market share.
Into the black before 1984."

According to Mr Cho, at the end of this year the company's order book will be substantially I understand that a Japanese

Into the black before 1984."

According to Mr Cho, at the end of this year the company's order book will be substantially below that of last year. New orders in 1982, he says, are down by half.

Worse than this, he maintains: "Prices this year have falled 25 to 30 per cent, with resale values down even more sharply. As our prices for some ships.

As our prices for some ships are already below construction costs, it would be dangerous to sell them cheaper."

Earlier this year, the Associa-tion of West European Ship-builders attacked Korea for continuing to expand at a time of recession and over-capacity. The Association also com-plained that Europe could not compete with prices that were

y's ships on average 15 per cent less than "We did their own yards, Now Koreans in 1981, say some Japanese yards are year. I engaging in a price war just to

yard recently offered to build a 37,000-tonne hulk carrier for \$13m while its actual produc-tion cost is around \$17m. says

Despite all this gloom the fact remains that for comparative newscomers the South Koreans bave performed impressively in their climb up the ledder as a major shipbuilding

Shipbuilding output will be a record 1.6m gross registered tonnes this year. Export sales of both solps and repairs will hit an all-time high of perhaps \$2.8bn, a fourfold increase in

Dry cargo recovery 'in early 1985'

WORLD SHIPPING markets are unlikely to start moving strongly ahead until early 1985, although a gradual recovery could start late next year, according to the research arm of London shipbrokers Eggar Forrester.

The impetus for a rise in freight markets would come from iron ore transport for the steel industry. Trade linked with steel, also including coking coal, scrao and end-products, accounts for some 30 per cent of dry cargo business.

The surplus of world tonnage over demand is likely to start declining near the end of 1983, said Terminal Operators, the subsidiary which produced the shipping market study.

The tonnage balance expected to continue improving during 1984 and 1985, leading to a rise in freight rates. It described the current shipping slump as "probably mora serious

The study, which concentrates on dry cargo markets, said some slackness in the market—as the surplus liogers and tonnage is laid-up—will initially hold back

the rise in rates

The toonage surplus is expected to peak in the first half of 1983 at 28.7m deadweight tonnes, 358.7m dwt of supply comparing with 330m dwt of demand.

Tall in US.

Foreign share of French textile market passes 50%

French textile market has of textiles and clothing now passed the 50 per cent barrier cover only 75 per cent of this year, according to the manufacturers body Union des last, year. The ratio is not industries Textiles.

Preliminary figures show a 1983. per cent increase in industrial activity in the sector this year. But imports have been the first to gain from a volume growth of about 5.5 per cent in

The growth, stimulated by the Socialist administration's moves to boost low salaries, has

imports are reckoned to have gained three percentage points to reach 52 per cent of the French market Exports, meanwhile, are estimated to have declined slightly.

Exports, which account for foreign clients.

THE FOREIGN share of the 41 per cent of France's output

France's trade deficit for the sector reached FFr. 6.4on in the first 10 months and is estimated at FFr 7.5hn (£670m) far the

monitoring of imports but said the industry was not demanding the industry was not demanding
"a new Politiers," referring to
the customs measures imposed
against imports of video
equipment.

moves to boost low salaries, has been essentially in the range of hasic products where the French market is most vulner, able, according to the union's president, M Albert Sciournet.

Despite the devaluation of has recovered and the rate of the franc in June, and the high value of the dollar, which has righted the imbalance in France's textile trade with the IIS. Imports are reckoned to But the outlook for next very

But the outlook for next year is poor, with domestic demand to fall below the 1982 level and with no sign of strong recovery among France's 71

Filipino plantation talks reach critical stage

ELEVENTH-HOUR calks aimed tain; until Mr Marten makes at removing obstacles to British Involvement in a controversial plantations project in the Southern Philippines reached a critical stage yesterday, accord-ing to officials involved in the

A £6.5m loan by the Commonwealth Development Corpora-tion (CDC), one of Rritain's leading aid agencies, for an 8,000-hectare plantation in gusan del Sur on the southern has been stalled for several months by Mr Neil Marten, Minister for Overseas Develop-

nent, perhaps early next

statement, perhaps early next week.

More imponent, the threat of possible cancellation of CDCs. small investment is small investment is small investment in desperately need. Contact the permanent in the contact the property of the Philipp

Two other small in the permanent in the property in the area.

Main concern centres on presence in the plantation in the presence in the pres

months by Mr Neil Marten, Minister for Overseas Development.

The delay has become critical since the project, jointly run by the Philippine National Development Corporation (NDC) and Guthrie Plantations of Malaysia, is starved of cash for planting new palms.

The CDC's regional representative, based in Singapore, arrived in Manila this week to begin discussions. Late yesterday, a decision was understood to hang in the balance.

Officials involved in the talks said the negotiations were "at an extremely delicate stage," and a compromise—if one is to be reached—is expected to be found today. The outcoma is unlikely to be known for cer-

Astra-Dow Chemical link

DOW CHEMICAL the second largest U.S. chemical company, has reached agreement with Astra, the Swedish pharma-

of its strategy to offset falling profits in its bulk petrochemical The agreement with Astra,

which covers Sweden, Norway, Finland and Iceland, gives the Swedish company responsibility for the total launch and marketing of Dow products in those

In 1981, Dow recorded soles

counter drugs of some \$723m, about 6 per cent of fis \$11,56m (\$7.35m) total sales.

Dow said yesterday that the first product to be launched under the Astra agreement will be determine antillicationing ceutical company, to market
Dow's pharmaceutical products
in the Nordic countries.

Dow has been expanding its
pharmaceutical activities as part
of its strategy to effect falling.

This drift is sixed at these

print of Dow products in those others. The total launch and market of Dow products in those others. The total launch and over-the-tharmaceutical activities as part under the trademark of Teldane. This drug is aimed at those suffering from hay fever and other altergic reactions. Last July, Astra reactived agreement with Merck and control of the trademark of Teldane. This drug is aimed at those suffering from hay fever and other altergic reactions. Last July, Astra reactived agreement with Merck and control of the trademark of Teldane. This drug is aimed at those suffering from hay fever and other altergic reactions. Last July, Astra reactived agreement with Merck and control of the trademark of Teldane. This drug is aimed at those suffering from hay fever and other altergic reactions. Last July, Astra reactived agreement with Merck and control of the trademark of Teldane. This drug is aimed at those suffering from hay fever and other altergic reactions. Last July, Astra reactived agreement with Merck and control of its products in the trademark of Teldane. This drug is aimed at those suffering is aimed at those suffering from hay fever and other altergic reactions. Last July, Astra reactived agreement with Merck and control of its products in the trademark of Teldane.

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3.4%

Pym challenged over control of cruise missiles

MINISTERS were forced on to the defensive yesterday over the proposals to deploy U.S. cruise missiles in Britaio when Mr Francis Pym. the Foreign Secretary, admitted in the house of commons that he was unable to give an assurance that Britain would be able to veto their

He was challenged on the issue by Mr Denis Healey, the Labour deputy leader, who opened an emergeory debate on Nato's outlear weapons policy, and by Dr David Owen, deputy leader of the Social Democratic Party. Mr Heoley said that if the Prime

Minister and Cabioet did not have dual control mer the cruise missiles, it would mark a departure from previous agreements govern-ing the location of U.S. nuclear capabilities io Britain.

To Labour cheers, he demanded were deployed to Britain, they would be subjected to "exactly the same dual control arrangements which had featured in earlier agree- the negotiating table.

ments with the U.S.

Mr Pym replied: "I cannot give that assurance." But he acknowledged that such an arrangement would be "bighly desirable" and hinted that the Government was likely to seek the necessary agreemeot before U.S. cruise missiles were installed in Britain.

He was adamant that the Government would go ahead with the de- the Foreign Secretary and the Forployment of 160 cruise missiles in eign Office all the more difficult. Britain at the end of next year unless the Soviet Union agreed to stony and callous indifference soe dismantle all the SS20s and other seems to show to the idea of arms intermediate, land-based nuclear control and her tendency delib missiles targeted on Western Eu-

other approach would be to rule out any real prospect of an agreement the Government took the steps between the Soviet Union and the needed to convince the British peo-Nato allies on balanced and verifi- ple that it was using all its energy able reductions in nuclear weapons. and ingenuity to stop the nuclear

Mr Pym warned that demonstra- arms race ing able to achieve their objective of fail," he said.



Pym: unable to oive assurance

an assurance that if cruise missiles oreventing, or indefinitely delaying, the modernisation of Nato's forces without them being required to make any matching concessions at

Mr Healey claimed that public concern on both sides of the Atlantic about Nato's excessive dependence on nuclear weapons was greater than ever before.

He strongly attacked the Prime Minister's attitude to nuclear disarmament and suggested that her posture was making the task of

"I find myself appalled by the erately to provoke jingoistic hyste ria on issues which demand ration He maintained that to adopt any al and objective thought," he said. Mr Healey said it was vital that

tions in support of unitateral. "If it fails to do this, it will lose disarmament by Britain were their confidence, will deserve to strengthening Russian hopes of be-lose it, and its policies will surely "If it fails to do this, it will lose

Shipyard orders will not save 1,800 jobs

By Andrew Fisher

THE £585m boost to British Shipbuilders' (BS) depleted order books as a result of the latest UK naval orders will not prevent the nationalised group from cutting some 1,800 jobs by the end of next March. Nor does it seem likely that the 65,000 BS workers will be offered a pay increase next spring after the

5.8 per ceot settlement this year. Mr Robert Atkinson, the BS chairman, this week explained the tough situation in shipbuilding to trade unions at a meeting in New-castle. Orders for merchant ships have slumped worldwide.

The UK orders for four oew Type 22 frigates, two each to be built by Yarrow in Scotland and Swan Hunter on the Tyne in North-East England, and for two anti-mine vessels at Vosper Thernycroft in Southamptoo, bad been taken into account when the BS chairman met the union representatives.

Mr Atkinson said that apart from the job reductions, action would be taken to cut costs. One of the mos effective ways of doing so is likely to include an attempt to keep wages and salaries static next year. The addition of the warship or

ders announced this week brings the BS paval order book up to 2.3bn. This will be raised by the Government's decision to build another frigate later.

The worldwide shipping slump however, has badly affected the BS merchant order book. At eod-September, the backlog of 828,300 gross registered tons was worth C687m, a long way down on the level a year ago of £784m for 932,200

Last year, BS benefited from a steady inflow of oew merchant orders, which totalled £385m for 462,500 tons in the first nine

The comparable inflow for this year was only £236m, representing 212,800 tons. The Government has already said the nationalised concern would miss its much-reduced Clom loss target for the financial year to oext March.

DIABETES

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TO £10,000,000

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SUITS

SHIRTS

BRITISH DIABETIC 10 Queen Anne Street, London WIM OBD

BP poised for Wytch oil control

BY RAY DAFTER, ENERGY EDITOR

BRITISH PETROLEUM may submit a last-mioute hid to British Gas to wrest the cootrolling interest in the Wytch Farm oil field in Dorset.

It is understood that BP is waiting to see the outcome of the deliberations by the corporation and the Department of Energy oo bids submitted so far. But it was felt within the industry that the oil major would not be prepared to see the operatorship stay with British Gas or move to a small independent company.

At present the ownership of the field - the biggest onshore discovery in the UK - is split between British Gas and BP. British Gas, the present operator, has been told by the Government to sell its hall share.

The British Gas board yester day reviewed three shortlisted bids for the corporation's stake. They are believed to have been submitted by a group of indepen-

BY JOHN GRIFFTTHS

ly militant plaot on Merseyside,

which builds the best-selling Escort, have been told that details of the

findings will be released early next

Though there is as yet no firm

commitment to redundancies, Ford

is known to be anxious to reduce

the still large productivity gap be-tween Halewood and its sister Es-

cort-producing plant in West Ger-

The 7,500 workers at the Saar-

louis Escort plant have consistently

been producing 1,300 cars a day since the model was lauoched at the end of 1981. While there are

some minor differences between

the two plants, Halewood's 9,700

workers on the Escort lines in the

past have frequently failed to reach 950 vehicles a day.

Halewood's performance has im-

proved recently, with the exception of the one-week strike last month,

and it bas moved closer to the 1,000-

gets were met consisteotly. Ford

to three years by rivals such as BL.

Vauxball and Talbot Its total work

force has shrunk since 1979 from

59,000 to 49,000, almost all of which

Sale price from £195

Saleprice £95

Sak price £15

Saleprice £20

_Sale price £6

_Saleprice £5

Sale price £39

_Saleprice£15

Sale price from £80

gramme next year.

many, at Saarlouis.

dent oil companies led by London and Scottish Marine Oil; a consortium including Rin Tinto-Zinc, Charterhouse Petroleum and Associated British Foods: and a newly formed, independent company, Ashdown Oil.

It is thought that the hids were far short of the £450m valuation initially provided by British Gas. Stockbrokers said that bids may not have exceeded more than £150m, although it is known that each of the submissions was structured differently.

British Gas refused to say whether it had been prepared to recommend one of the bids to the Energy Department. A statement is not expected until next month. Under the field development

agreement with British Gas, BP has the option to duy the corporadon's share by matching any other bid. It may decide to take op the option for one of at least

Ford studies redundancy plan

about a reduction from 24,000 to

General Motors will be the

first car maker to produce an ad-

vanced continuously variable car

transmission in Europe, ft is

tooling up for the transmission at

its Strasbourg plant, according to

The Engineer magazine.

In its latest issue the magazine

says industry sources have con-

firmed that the transmission is

for medium-size froot-wheel drive saloons and that GM is

seeking customers for it outside

of its own Vauxhall-Opef car up-

erations. Last month GM an-nounced that it was to spend

\$180m at the plant over the next

three years for a new automatic

for example, the savings at Hale-

wood are regarded as insignificant.

pects to sell in the UK this year. ft

cort at Halewood, output of which cent in 1983.

labour flexibility problems.

to details.

cars-a-day level. But even if its far. It is also a plant where Ford has gets were met consistently. Ford made possibly the least progress of

still regards the plant as over- all in eradicating demarcation and

Hitherto, Ford's workforce has Ford still hopes that Halewood

got off lightly compared with the beavy cuts made over the past two 130,000 of the 150,000 Escorts it ex-

nission, but it did not go in-

for 'overstaffed' Halewood

FORD has begue an in-depth study has been achieved by natural was-of labour costs and efficiency levels tage. There have been no compulso-

at its Halewood car plant on Mers- ry redundancies and very few vol-

eyside which is expected to lead to untary redundancy schemes.

a voluntary redundancy pro- But while this policy has brought

Union ufficials at the traditional- 19,000 in the Dagenham workforce,

The other bids may be lower than its own valuation of the as-

 ft may not want to play second fiddle to a much smaller field op-It may not want British Gas,

without any equity stake, remaining as operator. There have been suggestions that British Gas might be paid a manage-ment fee to operate the field on behalf of a successful independent bidder. BP need not end up with a 100

per cent stake in the field. Hav-ing bought British Gas's stake, it might then resell a substantia interest - perhaps to one of the uriginal bidders - and thus retain the majority, operating interest. BP is to cut its headquarters staff by about 40 per cent as part of a reorganisation of business interests. Mr Peter Walters, its chairman, said yesterday he hoped to reduce corporate head-

sbould start next month. The pro-

gramme has been postponed once

time working in the new year.

uncertaio state of the market.

eod of this year because of the then

but predictions of a larger new car

of Escort sales make this appear a

Sales of Volkswagen and Audi ve-

hicles in Britain in 1983 have

reached 100,000, the first time this

ports began in 1953, just over 1m

ehicles have been sold.

After the 16 per ceot increase in

sales from 86,203 last year, the com-

pany expects a further 12.5 per cent rise to 112,500 vehicles in 1983.

en from 80,221 last year to an expected 92,000 for 1982 and are fore-

Car registrations alone have ris-

level has been reached in a year. The improvement in the German company's position in the UK can be judged by the fact that since im-

fairly remote possibility.

quarters staff in the City of London from about 575 to nearer 350 by the end of next year.

The move would involve some redundancies, he said, although it was hoped that a substantial number would be shed through natural wastage.

Mr Walters said he was seeking a "more cost-effective management structure." In future the readquarters would be primarily concerned with "strategic policies" embracing regional directorates; secretarial, legal and financial services; and the corporate affairs and planning

The move is in line with a general trend in the oil and chemical industries to cut central overheads. Imperial Chemical Industries (ICI) has announced a simflar exercise which could affect up to half of the 1,050 staff who work in its headquarters in Lon-don.

gross premiums.

On other reinsurance business, a tompany must disclose the identity of the reinsurance group if it pays out 5 per cent or more of its total premiums "payable by the company in respect of all such other reinsur-

These measures are a step towards improving the disciplines in a community which in recent years has been rife with abuses. Legislators have traditionally taken a bemgn view of reinsurance, accepting

companies and Lloyd's underwriters use the reinsurance market to lay off large parts of their portfoles of business and spread their risks. Losses from insurance claims are

The department's new rules pro vice a monitoring system and will help identify when UK insurers or reinsurers are concentrating large parts of their portfeites of business with any one, and perhaps coreli-

agriculture spokesman, said the EEC had continued to export subsidised butter over the last few years despite the decision of the Council of Ministers.

sions on arrangements for New Cast to move to f02,000 in f983. stons on arrangements for New This year, Volkswagen Audi will Zealand imports could not be retake just over 6 per cent of the UK opened. Mr Tooy Marlow, a Connew car market and, if its estimates servative MP, said the public felt a means onerous, have been greeted "strong revulsion" over cheap but hy the industry with a measure of

Call to bar butter sales to Russia

THE GOVERNMENT came under already, however, because of pro-ductivity problems at Halewood. strong pressure from both sides of the House of Commons yesterday The plant's workers were told of to stop the export of subsidised the redundancy study at a joint works committee oo Tuesday, held EEC butter to the Soviet Union. Mr Alick Buchaoan-Smith, the at the unions' request. Part of their reason for calling it was to voice concern at reports of possible short-Minister of State for Agriculture,

reporting on the EEC Council of Agriculture Ministers in Brussels, said Ford had at one stage hioted at possible short-time working at the the deal would have to be discussed again before Christmas. Mr Buebanan-Smith said the French and Irish Governments had

Ford is still unwilling to guaran-tee that there will oot be short-time iodicated they were not prepared to implement new rules for imports of working after the end of January, New Zealand hutter until the European Commission authorised butter exports to Russia. market next year and the strength "I made clear that there is no pos-

sible justification for the objections of these two delegations, which are an abuse of the council procedures," Mr Norman Buchan, the Labour

"Does this mean that this matter is now going to pass outside our cootrol and that the wishes of the Council of Ministers are to be flout-

has revived its programme to huild new car market and, if its estimates the sports XR 3 version of the Es- are correct, will lift this to 6.42 per

jor reinsurers from January 5 next The department said yesterday that if a company reinsured a pro-portion or fixed sbare of his general business with a reinsurer he must disclose the identity of the reinsurer if the amount paid out represented 2 per cent or more of his

Tighter

rules for

business

By Juhn Moore,

City Currespondent

reinsurance

NEW RULES for the supervision of

reinsurance by the Department of

Trade, Britain's ultimate regulatory

authority for the insurance indus-

try, will require insurance compa-

nies to provide details of their ma-

that its function is a vital adjunct of commercial activity to the world's nsurance business Like bookmakers, the insurance

spread among the many rather than borne by the few.

able reinsurance group.

Britain is one of the few countries to extend its supervision of the insurance community in the reinsurance area. Legislators in other countries take the view that reinsurance is a market of professionals, no member of the public is directly affected and reinsurance needs to be arranged quickly with the minimum of bureaucratic delay.

Lock of regulations has meant that the freedoms of the reinsurance market have often been abused. Large sums of money have often been placed with shop" reinsurance groups which are Mr Buchan won wide suport often in the morket merely to use when he stressed that the discussurance activity for other non-



The drink on the dry side.



ULTRAMAR PLC

Notice is hereby given of the appointment of Lloyds Bank Plc as Registrar

All documents for registration and correspondence should in future be sent to the address below.

T.J. HUNT, Esq. SECRETARY



Registrars Department, Goring-by-Sea, Worthing, West Sussex BN12 6DA. Telephone: Worthing 502541 (STD code 0903)

Linyds Bank Pic

Lloyds Bank Plc,

131/132 New Bond Street, London W1.

BIANDS INMANIAD

UK seeks more European flights

By Michael Donne

GREATER freedom for airlines to start regional air services between the UK and destinations on the European Continent will be sought by Mr Iain Sproat, Parliameotary Uoder-Secretary for Trade, at a meeting of Commoo Market transport ministers in Brussels today.

Mr Sproat, who is responsible for UK civil aviation affairs, is determined to achieve a greater opportunity for British airlines to start services to Continental destinations, especially from UK airports other than Heathrow and Gatwick

His view, which is shared by the Civil Aviation Authority and the UK air transport industry, is that many more such regional services could be operated, but that so far these have been blocked by Contineotal governments.

The UK's proposals involve the other members of the European Community agreeing to an increase io the number of services that can be flown by aircraft with a maximum of 70 seats, and involving maximum distances of only 400 km. Services linking capital cities are excluded from the proposals. The aim is to try to get more ser-

vices not only between the UK and the Continent but also within the Continent The significant oew element in

the UK's plan, however, is that ap-proval for such services would be required only from the "country of origio. Hitherto, any new air service has required the approval of the destination, country as well.

This means that if a UK airline

wanted to fly from, say, Birming ham to Amsterdam, it would be able to do so if the UK Government approved, with Dutch approval not Similarly, if a Continental airline

point in its own country to anywhere in the UK other than London, it would oeed only the approval of its own government. If the plan were accepted, i would be a significant break-

workers. No prior advice was sought from plications.

wished to fly from a provincial

through in the UK's long light to get more liberal regulations and cheaper fares in European air transport.

Union presses Woolworth to adopt new marketing strategy

BY DAVID CHURCHILL, CONSUMER AFFAIRS CORRESPONDENT

A WIDE-RANGING "survival plan" for the F.W. Woolworth stores chain is to be presented to the company today by the white-collar union, the Association of Scientific, Technical and Managerial Staffs. The union, which claims to have

some two-thirds of Woolworth store managers in membership, has put forward a detailed analysis of the company's problems and some sug-gestions for enabling it to survive in the current tough trading conditions to the retail sector.

Proposals include simplifying the management structure to give more direct responsibility for decisions on store operations to local managers and to head office."

duction in costs. The union says that "there is still a market for Woolworth goods as traditionally strategy - such as the oroduct mix perceived, but that Woolworth's im- and company image - depends "on age of 'value for money' must be re-established in the public's mind." It believes there are several faults with the current marketing

strategy - such as the lack of a clear product image, a poor shopping en-Under the union's proposals, dise range and price. "We also sug- to be launched.

The main thrust of the union's gest reductions in the number of de-strategy is for a new marketing partments in individual stores and plan for Woolworth, allied to a re-improvements in layout and ser-

Achieving the new marketing managers and other staff having the correct incentives to achieve

precisely those objectives." In order to make Woolworth's products price competitive, the union acknowledges that overall vironment, lack of price stability, costs have to be reduced. It sug-and understaffing on the shop floor, gests a number of short-term sayings to improve the company's cur-Woolworth stores would compete rent position and release funds to with local stores more on merchanenable the new marketing strategy rent position and release funds to

CHARLES BATCHELOR REPORTS ON £27M OFFER

London Brick in merger bid

shire-based Ibstock Johnseo group. of turnover. The merger will create a company

The two companies had aggregate 1981 sales of £187m and employed at the year-end 11,000 people in Britain and overseas, although ket share, makes more expensive London Brick has since shed more facing bricks, which tend to be

give a ruling on whether it will be referred to the Monopolies and Mergers Commission within about three weeks.

London Brick will offer three new

ordinary shares of 25p each and 20p in cash for every four existing 25p ordinary Ibstock shares. Based on London Brick, down 6p on the day, the offer values each Ibstock share

trading resumed.

The merger between the two companies will link the Ford and

LONDON BRICK, Britain's largest further concentration in a sector hrickmaker, is to make an agreed where the five big companies al-bid worth C27.25m for the Leicester ready account for about 90 per cent

London Brick, which accounts for with 46 per cent of the UK market. 39 per cent of the UK market, produces a low-cost brick much used in the house construction market. fostock, which has a 7 per cent marchosen by architects for specific ap-

No prior advice was sought the office of Fair Trading, which was informed of the proposed merofit the fletton type of brick. Less fuel is needed to produce this brick. terday. The OFT can be expected to but it is not as tough as non-fletton

London Brick is largely dependent on the UK market, where the decline in housing starts has de-pressed demand. The recession has led to the closure of lour plants and a reduction in the workforce from 8,400 to 5,000. London Brick's only yesterday's closing price of 121p for overseas interest is in Australia, where it recently increased its holding in Brick and Pipe Industries to 19.9 per cent.

difficulties in both its major marcompanies will link the Ford and kets. Compared with its UK hrick ston, which designs brick-making the Rolls-Royce of the British brick-building capacity of 255m bricks a plants, more fully within the making industry. It will lead to a year, it has 520m capacity in the merged company.

However, U.S. capacity, acquired when the Marion Brick and Glen-Gery corporations were bought in 1976 and 1972, has been only 40 per cent in use in the past year. At the Huga group in the Netherlands, two of the six plants have been tempor-arily shut and production is only 100m bricks a year.

open in the Netherlands, so the closure or sale of Huga is a theoretical possicility. But the company hopes that the Dutch industry will agree to cur total capacity from 255n bricks to 155n for a five-year period from Japuary

l'asteck is keeping its options

London Brick said it intends to strengthen Ibstock's position to the

Ibstock, which provides a design service for architects and co-operates closely on the buildings in which its products are used, believes ir will contribute a sophisticated marketing apparaturs to the new group.

Ibstock, which was suspended at Ibstock has substantial merseas London Brick, in turn, will are stip on Tuesday, rose to 93p when interests, which were built up durvide Ibstock with technical and reing the 1970s. But it has run into search facilities. London Brick hopes to use its engineering divi-

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مكذا مولامل

upheld by a majority a Commercial Court ruling that a dis-pute between the Kuwait Lord Justice May said the Insurance Company and a crucial fact on the issue of the

in Kuwait and not in England.
An appeal by Amin Rasheed Shipping Corporation against Mr Justice Bingham's decision in March to set aside an order giving Rasheed leave to serve English court proceedings on KIC in Kuwait was dismissed. Rasheed was given leave to

appeal to the House of Lords.
The dispute concerned the vessel Al-Wahab, owned by Rasheed and insured by KtC, that was seized in a Saudi Arabian and appearation of Arahian port on suspicion of smuogling diesel oil from Saudi Arabia to the United Arab

Rasheed gave notice of abandonment, on the ground that the vessel was a construcnotice; Rashced began legal

Mr Justice Bingham decided in the Commercial Court that the marine insurance contract in dispute was governed by Kuwaiti law and that a Kuwaiti Kuwaiti law and that a Kuwaiti judge would in any event be more familiar with local trading tract — notably the Lloyd's SG poticy — had become so much a fine currency of inter-

ssess the evidence.

In the Appeal Court Lord Justice May decided that the contract, which closely followed the standard Lloyd's SG policy, was governed by English law, Mr Justice Bingham had been

Sir John Donaldson,

THE Court of Appeal yesterday Master of the Rolls, in a dissenting judgment, opted for English law and trial in England. Liberian shipping company governing law was that the hased in Duhai should be tried English language contract could

not be properly construed or applied without at least some reference to the vast body of English legal learning and decisions. He inclined to the view, however, that justice demanded

however, that justice demanded a Kuwalti trial.

Lord Justice Goff was unable to accept Rasheed's contention that English was the proper law because there had heen no marine insurance law in Kuwatt when the policy was issued.

It was true, said the judge, that there had been no marine insurance law as such but there insurance law as such but there

insurance law as such but there was a perfectly comprehensible hasis on which the Kuwaiti courts, applying Kuwaiti law, could adjudicate on marine insurance disputes.

The fact that Kuwaiti lawyers and courts might have recourse to the practice and principles nf English marine insurance law did not render their decisions any the less decisions on

part of the currency of inter-national commerce that the use of such a policy did not indicate Sir John Donaldson said

marine insurance was a new Mr Justice Bingham had been entitled. as a matter of practicality to decide that the Kuwaiti court was the better forum.

Lord Justice Goff held that the governing law was that of Kuwait. He expressed no view on the practicalities.

"Industry" in Kuwait.

The practicalities marginally favoured a trial in England, said Sir John. The crew of the vessel spoke English, not Arabic, those who fixed the charter were in England, no translation of documents would be praced.

UK ECONOMIC INDICATORS

ECONOMIC ACTIVITY—Indices of Industrial production, manufacturing output (1975=100); engineering orders (1975=100); retail sales volume (1978=100); retail sales volume (1978=100); recastered unemployment (excluding school leavers) and unfilled vacancies (000s). All seasonally adjusted.

Indi. Mfg. Eng. Retail Retail Unemployment (1978=100); recastered unemployment (1978=100); recastered unemployment (1978=100); recastered unemployment (1978=100); retail unemployment (1978=1

	prod,	output	order	vol.	· value*	ployed	Vacs.
1981	•						
4th qir. 1982	101.0	E9.6	90	105.4	168.5	2,609	194
fol dtr.	100.6	89.3	92	106.6	141.3	2,679	112
2nd Atr.	101.1	88.9	88	106.2	145.4	2,743	107
3rd etc.	1n1.7	88.4		108.7	151.6	2,837	111
February	100.7	89.7	94	106.1	137.6	2,680	. 113
March	101.1	89.8	88	106.6	142.3	2.688	111
April	3n1.3	89.1	96	105.9	146.1	2,715	120
May	101.5	89.4	93 .	105.9	¥45.4	2,740	187
June	100.4	88.0	76	106.8	144.8	2,773	105
July	101.5	88.3	86	107.6	152.2	2.814	-111.
August	101.5	BR.4	82	-109.2	150.9.	2,832 -	114
Scutember	10t.F	88.6		109.1	150.1	2,866	107
Detuber	101.5	87.9		109.2	158.8	2,885	114
November				109.5		2,903	114

informediate goods (materials and fuels); engineering output, nicial manufacture, textiles, leather and clothing (1975=100); Consumer Invst. Metal Textile House.

-004	goods	Priore	Booms	output	mpig.	CIL.	STATE OF
1981 4th qtr.	93.3	89.3	122.9	'85.8	82.3	75.6	11.6
1982 1-1 111	92.4	90.8	121.0	86.3	80.6	73.9	14.7
und hir.	91.8	91.8	122.0	86.5	77.3	72.1	17.5
3rd qtr.	91.4	91.4	122.6	86.5	71.8	71.7	17.7
February	93.0	91.0	121.0	86.0	82.0	75.0	15.2
March	93.0	92.0	122.0	g7.0	79.0	73.0	. 17.5
April	92.0	92.a	123.0	86.0	80.0	74.0	17.1
May	93.0	92.0	122.0	87.0	79.0	73.0	17,7
June	91.0	92.0	121.0	86.0	72.0	69.0	17.6
July	91.0	92.0	123.0	86.0	72.0	71.0	17.3
August	91.8	91.n	122.0	87.0	71.0	70.0	18.5
September	92.0	92.n	123.0	87.0	72.0	- 74.0	19.8
Delober	93.0	90.0	122.0	86.0	69.0	73.0	15.0
EXTERNA	L TR	DE-In	dices of	export	and in	port v	olume

EXTERNAL TRADE—Indices of export and import volume 11975=100); visible balance; current balance (£m); oil balance (£m); terms of trade (1975=100); exchange reserves.

Export Import Visible Current Oil Terms Resv. volume volume balance balance balance trade US\$bo*

1981							
41h qtr. 1982	132.0	125.7	+490	+1,483	+698	99.2	23.35
1st our.	125.3	122.5	+ 323	+ 720	+ 797	101.4	18.97
2nd uir.	130.7	129.1	+103	+887	+ 882	101.1	17.70
3rd utr.	124.5	125.5	+388	+ 968	+1.258	100.6	. 18.30
February	124.3	120.2	+177	+ 309	+289	100.7	23.37
March	132.7	124.5	+260	+ 392	+231	101.3	18.97
April	133.7	128.5	+ 224	+485	+ 406	101.4	18.16
May	132.n	134.0	-115	+14g	+314	100.9	17.82
June	126.4	124.8	- 7	+254	+162	101.0	17.70
July	125.7	124.0	+166	+ 366	+401	100.5	17.94
August	117.6	124.3	- 37	+163	+484	101.5	18.11
September	130.3	128.2	+239	+439	+373	99.9	18.30
October 1	107 4	124 0	J- 250	+450	- 406	98 7	18 50

FINANCIAL—Money supply M1 and sterling M3, bank advances in sterling to the private sector (three months' growth at annual rate); doinestic credit expansion (fm); building societies' net inflow; HP, new credit; all seasonally adjusted. Minimum lending rate (end period).

18.60

	31 t	M3	aqvance	fin	inflow	lending	%
1981 41h qrr.			-	+2,365	451	2,881	_
1982 1st gtr.		8.2	26,2	+3,194 +4,583	987 1,344	2,157 2,18g	
2n d gtr. 3rd gtr. February	2.1 15.2 8.n	12.6 6.9	28.3 17.1	+4.851	1,796 347	2,399	
March April	- 3. 7 - 3.3	7.2 4.8	24.5 26.I	+1,206 +1,648	264 437	794 728	
May June	- n.5	9.5 10.3	26.8 25.8	+1,684 +1,251	478 429	710 750	
July August	14.2 17.5	11.4 12.4	26.6	+1.370 + 2.036	69 1 437	698 856	
Seplember October		13.9 18.1	28.g 32.4	+1,439 +2,867	886 886	845 800.	
November	-				763		

INFLATION—Indices of earnings (Jan 1975=100); basic materials and fuels, wholesale prices of manufactured products [1875=100]; retail prices and food prices (1974=100); FT commodity index (July 1952=100); trade weighted value of

Committed			1997 10	u), ua	16 M 04Ph		
sterling i	1975 = 10	0).			_		
_	Earn- ings*	Basic matts.*	Whsale. mnfg.*	RPI*	Foods*	FT* comdty.	Strig.
1981 415 qtr.	214.8	237.3	229.2	306.5	285.8	248.87	89.7
1982 Isl qtr. Ind qtr.	216.9 222.7	238.2 240.0	234.3 238.2	311.6 321.5	297.7 304.1	242.40 233.46	91.I 90.3
3rd otr. February	227,8 217.0	244.9 240.1	242.0 234.4	323.0 310.7	297.0 297.2	228.88 241.77	91.4 91.5
March April	219.7 219.8	235.7 239,2	235.5 237.0	313.4 318.7	299.g 302.8 305.g	242.40 246.84 237.39	90.8 90.0 89.9
May June July	222.5 226.0	237.7 243.2 245.0	238.3 239.2 241.11	322.0 322.9 323.0	304.1 299.5	233.46 229.51	91.1 91.2
August . September	230.3 226.9 226.2	244.1 245.0	241.7 243.2	323.1 322.9	295.8 295.9	229.60 228.56	91.4 91.7
Ortober November	228.0	246.4 251.6	245.1 246.4	324.5	296.5	227,18 228.03	92.5 89.5
		Vot s	easonally	· adjuste	ed.		ı

Marine insurance decision upheld by raymond Hughes, Law courts correspondent by Max Wilkinson, Economics Correspondent back to average of 6.1%

BY MAX WILKINSON, ECONOMICS CORRESPONDENT

SETTLEMENTS in the present pay round, which started in August, are clearly below the level of last year, the Confederation of British Industry (CBI) said yesterday.

The average pay increase agreed in the 157 settlements reported to the employers' federation in the three months to October was 6.1 per cent, about 1 percentage point less than settlements agreed in the same period last year.

Official figures from the Department of Employment, also published yesterday, show that the annual increase in average earnings was 7.3 per cent in October which suggests an underlying rate of in-crease of 8% per cent, the same as

The figures are somewhat higher than those from the CBI, because they include increases in overtime and other payments as well as basic A reduction in the rate of pay set-

tlements in the current round is crucial to the Government's strategy for reviving the economy and eventually promoting a reduction in the number of unemployed. Having rejected the idea of a major reflation of demand, the Govern-

ment is hoping that British indus-try will be able to increase its share

Settlements

1982

1981 of markets at home and abroad by improving its competitiveness

1980

In the absence of a substantial provement would have to be brought about by increased produc-tivity and reduced wage settle-

Since a fast increase in productivity would, in the first instance, tend to worsen unemployment, ministers believe that great emphasis must be placed on a reduction in wage increases.

This is also seen as an important part of the Government's efforts to contain its own spending and,

scope for tax cuts and a further re duction of interest rates.

The Department of Employmen figures yesterday showed that basic weekly pay rates rose only 4.2 per cent in the 12 months to November. This compared with annual rates of increase of 7 per cent to June and about 6 per cent for the four months July to October.

The underlying annual rate of increase in earnings has been falling steadily for most of this year from 11 per cent in the autumn of 1981. Settlements so far reported in the

current pay round represent only about 2 to 3 per cent of the total expected before next summer. However, the CBI says: "There is now undoubted evidence of a fall in the average level of settlements." al-though it adds that this does not mean that all individual settlements are lower

The CBI's pay databank reports that 52 per cent of reported settlements in the present pay round are lower than in 1981, with 40 per cent higher and 8 per cent at the same

Of the settlements reported, nearly a quarter were for 4 per cent or less, with 57 per cent for 6 per cent or less. Only 15 per cent of settlements were for increases of more

War base for U.S. confirmed

By John Deans

MRS MARGARET THATCHER. the Prime Minister, confirmed in the House of Commons last night that the U.S. European forces may site their wartime command base at the Daws Hill air base near High Wycombe in Buckinghamshire.

Her statement follows recent UK newspaper reports that the U.S. planned to build an "alternative" war headquarters at the Daws Hill USAF base which would be for European Command staff from Stuttgart. West Germany.

Mrs Thatcher, replying to a question by Mr Frank Allaun, a Labour MP, said: "We have agreed that in wartime an alternative headquarters for parts of the U.S. European Command may be located at Wy combe air station."

The Prime Minister said it would be a purely national headquarters, which is not the same as a Nato headquarters." The American European Command, she said, was re-spoosible for directing the reinforcements and the logistic support of U.S. forces in Europe.

Mrs Thatcher added: "Forward defence remains an essential ele-ment of Nato's political and military

Iron founders claim coke price rise threatens companies

BY ARTHUR SMITH, MIDLANDS CORRESPONDENT

and excess capacity, gave a warn-tonne in Belgium, £91.29 in Wing last night that an expected in Germany and £69.52 in France. crease in the price of coke could put many companies out of business.

Birmingham yesterday, instructed coke. Mr Derek Farrant, the council's dicoke from overseas.

Mr Farrant said that the Department of Energy, under a deal which pacity. Losses are being incurred runs out at the end of this year, curand further closures are expected. runs out at the end of this year, cur-rently pays £10 a tonne to keep the price of oven coke down to £95.30. Council members were alarmed that the department had still to announce what it would do about proposals by National Smokeless Fuels, the wholly-owned subsidiary of the National Coal Board, to in crease prices by between £23 and

£26 a tonne from January 1. Mr Farrant said; "People around the table reported that foundries put many companies out of husi-

He maintained that British companies, already affected by cheap imports, were placed at a strong

BRITAIN's troubled iron foundry disadvantage by the price of fuels. industry, squeezed by low prices. He said that coke cost £88.29 a tonne in Belgium, £91.29 in West

Any move by the iron founders to buy from other countries would be A special meeting of the Council a blow as the industry last year of Ironfoundry Associations, held in alone consumed 325,000 tonnes of

The sector, heavily dependent on rector, to explore with coal mer the declining automotive industry, chants the potential for importing has been hit hard by the recession. only about 50 to 60 per cent of ca-

> Lazard Brothers, the merchant bank, which has already drawn up a scheme for the steel casungs industry, has held preliminary talks with leading iron founders. The hope is that Lazard can draw

up a rationalisation scheme, in agreement with key members of the industry, before approaching the Department of Industry for fi nancial assistance. are already in such dire straits that British Steel Corporation has cut

any increase in the fuel price could another 130 jobs at its Scunthorpe plate mill in Lincolnshire. The corporation has now announced 675 job losses at the Scunthorpe works in the last five days and 1,375 since



In the last few years Railfreight has acquired a sharper, more competitive edge.

There's nothing like a recession for making a company as large as ours take a long, hard look Speedlink service.

Now any load, from a lorry-sized wagon to a trainload, can be freighted across Britain, on Inter- TV sets, micro-computers, glassware and pottery Gty tracks. And even across the Channel.

Operating day and night, at speeds up to 75mph. Speedlink usually delivers the goods in under 24 hours, and often overnight.

Not just from siding to siding but from manufacturer to consumer.

And from warehouse to distribution centre, Our computer system, TOPS, monitors every at itself. Just one example of this new vitality is our wagon on every train. So your goods arrive safely, a major role in freight transport through the 80s. and to regular scheduled timetables.

> Now breakfast cereals, whisky chocolate, are all being distributed by Speedlink.

> As new kinds of product come onto the rails, so new kinds of wagon have been specially designed to accommodate them.

There are new ranges of purpose-built vans. And independent contractors can lease others for your specific needs.

With Speedlink, Railfreight is geared up to play

The question is, what can we do for you?

For more information write to Mike Jones, Speedlink Marketing Officer, 222 Marylebone Rd. London NW16||, Or alternatively telephone

Put your business back on the rails.

Bell's tries a new mix in the U.S. whisky market

BY PAUL TAYLOR

FOR 15 years Arthur C. Bell and Sons, the Scotch whisky manufacturer, has been attempting to penetrate the lucrative U.S. market. So far it has been miserably unsuccessful.

While the company can claim the number 3 position worldwide with 7 per cent of total Scotch sales, its share of the 20m case-a year U.S. market is a fraction of 1 per cent.

But Raymond Miquel, Bell's chlef executive, is out to change eli that. With a mixture of hold new advertising, grass roots marketing and a fierce determination he aims to take between 6 and 7 per cent of the U.S. market within the decade

If Miquel and Bell's succeed they will have achieved what most in the industry believe is close to impossible.

To win, the company has two npriors. Neither is easy. Either it must steal market share from the well entrenched hrand leaders like J & B, Dewar's, Cutty Sark and Johnnie Walker, or Bell's must generate a new niche for the hrand in a market which is, at best, in the

Miguel says, quite frankly, that he does not mind how he travels the road, just so long Nevertheless, the basis of the company's latest thrust into the market fits primarily into the

generation of Americans brought up, as liquor industry gurus are fond of observing, "on Coca Cola and Seven-up." A snap-shot of the average U.S. Scotch drinker would probably show a male executive aged over 40 who drinks bis Scotch "straight or with water." Bell's, on the other hand, is aiming at the largely-untapped female and younger segment of the market with money to spend

These are the people who sent U.S. vodka, gin, rum and white wine sales soaring in the 1970s and who helped push total whisky sales into second place to "white" liquors for the first time in 1979 time in 1979. The answer for Bell's, Miquel

belleves, is to win the new generation over to Scotch with mixed drinks. The argument runs along similar lines to that



Bell's share of the U.S. market to the 25 per cent it holds in the UK

Bell's wants to see Scotchpreferably its own — drunk with dry ginger or anything else which tempts the younger palate. This is a tried and tested formula for Bell's and one which helped Miquel boost the hrand from 6 per cent of the UK market in 1979 to around 25 per cent today.

The first stage of the cam-

second category. Miquel is trying to sell Bell's to a younger an advertising campaign into generation of Americans which Bell's is pourlog \$2m this which Bell's is pourlog \$2m this year and \$3m next. This compares with just \$1m last year. This is still small money in a market where the hrand-leaders spent between \$8m and \$10hn last year. But Miquel is being selective.

Billboards

runs along similar lines to that is in the process of trading in of Muhammed and the mounmany of its less-important bili-

board locations for such The nther half of Bell's strategy is marketing. Bell's has been through three different

Import agents aince 1968 search ing for an agent willing to find ways to win over dublous retailers. Since 1979 the company has been with Monsieur Henri Wines (MHW) on a contract which now has one year to run. This relationship too to run. This relationship too is ahowing aigns of strain. While Miquel is careful not to criticise MHW he clearly has no love for the U.S. style of marketing. "The only way tn aell a product is to get out into the field," he says. "Every time I arrive in the U.S. I spend, the first day visiting 20 stores to check on sales, pricing and distribution."

falls to Kanter who makes seven week field trips visiting the tar-get areas in between reporting back to Miquel In Scotland.
Miquel contrasts that with the

traditional marketing of Beli's in the U.S. which was done by someone sitting behind a desk

"someone sitting behind a desk picking up e telephone and doing 'deals'." Or, in the case of Bell's not doing deals.

Bell's has now been through the whole gamut of marketing "tricks" — everything from aquare bottles to price cuts.

According to Miquel and Kanter things bave settled down now. Where Bell's is found Miquel says that now it is increasingly standing alongside the hrand-leaders in the full range of (round) bottle sizes. "The foundation has been laid," says Kanter, "but there is still a long way to go."

Bell's dissatisfaction with its performance in the U.S. is such that there have been sugges-

that there have been sugges-tions that the company may drop MHW and set up its own importing and marketing operation.

Miquel will only say, "We are a company that does not want to brands doing relatively well against the standard brands. Aided by the company's one
U.S. representance. Herbert
Kanter (who Miquel recruited from one of the company's former U.S. import agents), has targeted six key U.S. market-places: New York. Chicago, Miami, the rest of Florida, Los Angeles and San Fransisco.

The advertising budget is being split between magazines and what Miquel calls "bithboard spectaculars." These are the prime poster sites and Bell's "We are to plus operation. Miquel in not heing able to develop this market as he has done in the UK," he says.

"We are behind him 100 per cent but wishing does not make



Beil's wants to see Scotch drunk with dry ginger or anything else which tempts the younger palete "

U.S. LIQUO	R MARK	ET (millio	os of 9-lit	re cases)	
(Fiscal)	1978	1979	1980	1987	1982
Distilled spirits	784.8	187.3	18.9	789.4	186.0
cotch	22.8	22.3	27.6	20,8	20.0
lottled scotch	24.4	73.9	73.1	12.2	11.7
J.S. hottled scotch	8.2	8.4	8.5	2.6	8.9
B-11-4					

Like others in the U.S. in-dustry Sol shares some doubts about whether Bell's can, with its relatively small promotion

·Love affair

been drifting steadily lower since 1978 although there are marked differences in performance between the various types of scotch with the pre-Shipments are also down from a peak of \$23m bottles

in 1974 to just 218m bottles in the first 10 months of this year although that was a marginal improvement over last year.

are more cautious. The latest industry estimates are that total Scotch sales will are that total Scotch sales will fall by a further two or three per cent next year; Scotch bottled in Scotland will be down by as much as five or six per cent. Single malts, which still account for only a tiny proportion of the market, should, however, fare better while the cheaper bulk brands bottled in the U.S. will continue to increase market share.

Most of Miquel's competitors admire his spirit but doubt whether his "contra market strategy" will succeed without massive additional expenditure. "When you can buy the pre-mium vodks for half the price of the premium Scotch, who is going to switch in a reces-sion?" says one rival importer. Nevertheless, most within the

crease market share.

Advertising: it's a gift

BY FEONA MCEWAN

It's a tool of the whole advertising industry now," says Harry Risner, who points out that customers are much more

choosy and price and quality conscious now. People are looking for lasting products and

although we've had to fight for business, very few clients have

cut out advertising gifts altogether." The average order

he records is for around £600 to £800, though it can reach £30,000 to £40,000. Most items cost individually around £3 to

"Companies have been re-

me places it's almost a neces-

sity to take a handout gift — namely the Iron Curtain, Middle

East and oil producing coun-

and away the best sellers. "Pen

Writing instruments are far

aligning their hudgets," says Maurice Hecker of Prestige

GARAGES IN Britain go for girlie calendars; banks and insurance companies plump for pens. The Nigerians, on the other hand, covet white marble. The Arabs go for gold and the Germans like leather.

The chances are that most of us have at some time or other. os nave at some time of the been on the receiving end of the givezway promotional product: a keyring with your petrol, a calendar from the greengrocer, or a diary from a valued con-

The world of the industrial gift covers both business and advertising gifts—a close distinction some say, perhaps best expressed as the thank-you-for-things-past gift versus the remember-us-in-future gift, respectively.

Far from recession dampening such generous gestures, presentgiving in the company name
seems to be enjoying something
of a boom. One guesstimate
puts the UK advertising gift
market at around £150m a year.
This includes wholesalers, ad-This includes wholesalers, advertising agencies as well as gift bouses. The British Advertising Gift Distributors Association (Bagda) reckons its 40 member companies turnover is £25m annually and growing. Bourne Publicity, which claims to be the largest company of its kind in Britain, reports a turnover of £5m this. reports a turnover of 55m this. year, representing a one-third increase over last year.

Two other leading industrial gift companies, Industrial Gifts and Gift Publicity have recently announced their merger which they anticipate will make them a major force in Europe.

The spark that draws companies to this below-the-line form of advertising may be anything from a promotional cam-paign, product launches, sales aid programmes, confer-ences or special occasions (jubilees, awards, retirements).

"Virtually any company hig or small is in the market for advertising gifts," says Harry. Eisner, managing director of Industrial Gifts. Traditional buyers like travel firms, airlines and garages are now joined increasingly by other service industries, including financial organisations like banks and insurance companies. (jubilees, awards, retirements). surance companies.

What began at the turn of the century as modest wall calen-dars simply inscribed with, say, a merchant's name, is now big ishing highly competitive mar-ket," says Beckett. "Is it not better to put a cube pad on every farmer's desk than expect him to notice ads in the local The expensive gift, certainly

on the home front seems a dying breed. Bagda secretary Herbert Hochfeld notes a shift from higher priced items in smaller quantities to cheaper mass orders. Overseas the opposite can be the case, according to Maks Kriegsman of Gist Publicity, whose company before the merger specialised in gifts for the image-conscious executive. from hide money

in gifts for the image-conscious executive. From hide money clips at £3.16 to white marble desk sets at £50 a throw.

One of the more original orders came from a Middle East bank which requested some 5,000 rulers embedded with its coins to give to valued clients. The National Westminster Bank, which normally eschew industrial gifts, commissioned commemorative Wedgwood plates (200 in black and gold, 1,000 in blue) to give to visitors when the Queen opened the Nat West Tower in the City. Shell UK oil advertising services manager advertising services manager Michael Beach reports that as a supplier we're in the husiness of buying gifts to use as give-aways, though it's not a sizeable chunk of our budget." The Shell calendar has now become a tradition and be believes it fulfils a corporate image-build-ing job.

ing job.
Not every company allows its employees in accept gifts of any type. The medical profession is particularly regulated here, and in 1974, along with the Association of British Pharmaceutical Industries, it drew up a code of practices. Advertising," in order that they have a handout when going overseas to exhibitions, etc., looking for export arders. In

practice. "Gifts to the form of articles designed as promotional aids, whether related to particular products or of general utility, may be distributed to members and away the best sellers. "Pen manufacturers are going through a hell of a time at the moment on the retail side and looking instead to the indusproducts," says John Beckett, marketing director of Bourne Publicity.

The products are going of the medical and allied profession provided gifts are inexpensive and relevant to the pharmacy."

Again, "No gift or financial inducement shall be given to the medical profession for the purpose of sale promotions."

"Glits can be a very, very effective way of advertising," believes John Beckett. Ford for one believes in this: for the pose of sale promotions."
Similarly the Institute of Purchasing and Supply which represents 17,000 individual members employed in the public and private sectors states in its launch of the Sierra, Bourne distributed Sierra-style wallplanners, lighters, jigsaws, calculators and more to 6,500 "Other than items of very small
garages across 15 countries.
"As another example, take diaries and calendars, gifts
tractors, which are in a diminshould not be accepted."

TECHNOLOGY

Robots fit for the fiery furnaces

BY ROY GARNER IN TOKYO

IMAGINE a metal elephant's trunk with e camera mounted on the end and you'll have a rough idea of the shape, size and movement characteristics of Toshiba Corporation's new
"Self-Approach system," one
of several robotic devices newly
developed by the company for eventual deployment 'n nuclear power facilities, chemical plants and similar dangerous

environments.
The robots, domonstrated in e Tokyo exhibition earlier this month, are all designed for in-spection epplications, end mark a phase in co-ordinated Toshiha
R & D projects aimed at the realisation of future genera-tions of nuclear power facility which feature near-total auto-

mation.
Toshiba is a leader in the field of BWR (boiling water reactor) nuclear power plants and its robot research department shares the same roof as the nuclear research teams, in the Energy Science and Technology laborators in Kawasaki

laboratory in Kawasaki.
The capabilities of the new the company already envisages e range of potential markets far beyond their primary appli-

The robots come in four types; the self-approach inspec-tion system, a floor-moving transporter robot, a monorall-based inspection system and a self-propelled pipe inspection

The self-approach system consists of an eight-jointed arm, with a girth of approximately 15 mm, 2.25 meters in length and weighing 23kg.
Each of the arm joints houses

a sub-motor which allows a 100 degree movement on a total of 16 planes, not including the rotation and forward and reverse facilities. A total of 56 "touch" sensors are distributed along the

can be programmed to trigger

DIPLOMA COURSE IN

WELDING TECHNOLOGY

Industry needs engineers trained and qualified to manage welding operations for economic and effective production. This modular course has

been organised jointly by The Welding Institute and Crantield Institute of

Technology to train young graduates to be the welding engineers of tha

Details: Training Information Officer, The Welding Institute, Abington Hall, Abington, Cambridge CB1 5AL Telephone 0223 891162 Telex 81183.

robot's extremity there is a miniature CCD (charged coup-ling device) camera, and this, and all the arm functions, are controlled by a 128K byte TOSBAC Micro 7 computer, programmed with in-housa SOFTWATE. The robotic arm was developed over a period of one and

length of the arm, and these





Shades of "Star Wars" R2D2; left, a monorall-based inspection robot reading meters. Right, a robot transporter.

either a curling movement of ber, Yoshiald Arimura, sug-the arm section or a movement gested that other future appliin the opposite direction. At the

of power plant structures and

a half years by a four-man re-search team led by Kuniji Asano. According to Asano, the new system can be mounted on anything from a floor transporter to a crane, and allows the comfortable inspection of previously inaccessible sections Another research team mem-

cations for the robot might include underwater, and space, inspection tasks. The system will be in production by 1985.
The robot transmitter is described as scribed as a more-moving robotic vehicle and moves on four independent caterpillar tracks, powered by batteries and guided by light sensors. The transporter is designed either for use as a simple camera mounting or as the base for a

more complex form of inspec-The monoral-based unit also carries a CCD camera on an adjustable metal stalk, and is designed for use within large facilities where a track can be laid around the building adjacent to vital equipment meters, and other items which regular monitoring. The unit is electrically powered and can travel both vertically and horizontally along its tracks, controlled by a central computer system.

The pipe-inspection robot,

which is still under develop-ment, consists of a three-wheeled trolley which carries two CCD eameras, one giving a general view of the pipe for navigational purposes and the other designed for detailed inspection of the pipe's wall. At present the robot can travel only up to 18 meters as this is power plant next year.

the maximum length of optical fibre currently available, for at-tachment to the rear of the

Earlier this year Toshiba and Hitachi, agreed to start new joint research and development prejects with six of Japan's 10 electric power utilities, including the technologically advanced Japan Atomic Power Company, and two of its nuclear power plant makers. The Y12bn estimated research costs will be shared equally between the two makers and the ntilities, and priority is being given to the development of "first-gener-ation" power plant robots

which will handle monitoring and ebecking functions. . The second stage of development will concentrate on robots capable of doing emergency repair nperations.

Mitsubishi Heavy Industries is also involved in nuclear plant robot development. In

August this year the company announced the joint-develop-ment, together with the Kansal Electric Power Company, of a robot with a flexible arm which incorporates equipment able to morritor and replace stopper plugs on the heat conduction tubes within nuclear electricity power plant steam generators. The new robot will be installed in the Mihama nuclear

Mitsubishi Heavy Industries has also recently developed a robot which offers the highly efficient cleaning of the sea water intakes of nuclear and thermo-electric power plants.
The Japanese quest for safet

nuclear power plants was given much added impetus by America's Three Mile Island in-cident in 1979, but pressure for greater robotisation of dangerous operations bas also come from a related labour union. In July this year, the Kansa Electric Power Company's union members urged that robots be developed to handle the checking of pinholes in steam generators to monitor piping systems for possible damage and for cleaning jobs. A union leader claimed that during the past decade more than 200 workers, mainly mem-bers of outside companies and sub-contracting companies, had died in work accidents at the

company's plants. One of the key jobs the unions hope to see automated is the semi-annual official inspection of the main steam now venting safety valves, of which there are as many as 18 in standard BWR plants. Participants in the current research activities estimate that total robotisation of dangerous processes might be completed within about 10

Motorola sells NTT pocket bells

BY GEOFFREY CHARLISH

A COMPLETE survey of the mobile radiotelephone situation in Japan is contained in a report

The 200 page reports costs \$795 and although much of it is devoted to the new cellular system operated by NTT (Nippon Telephone and Telegraph) in the greater Tokyo area, other subjects such as paging, marine radio and rail-way communications are also

There are in addition introductory chapters that deal with the official and administrative bodies concerned with radio in national and overseas manufacturers of radio equipment. There is an interesting com-ment on the appearance of Motorola on the Jepanese scene,

which has been previously dominated by such companies as Nippon Electric Company (NEC), Matsushita and Toshiba. The report says: "The Ameriman Government also gave political pressure on the pro-curement of NTT for Motorola to become one supplier of pocket bells to NTL." (Pocket bells are paging systems). "From now on "continues the report, "other foreign makers

One piece of business quoted is the Motorola order from NTT in Japan is contained in a report for 45,000 pagers this year. In just released by Eurogestion of the reverse direction, NEC and Tokyo and available in the UK Oki are prime exporters from the prime exporters from the prime of London (01-221 Japan. Oki, which does not supply NTT, is very active in the U.S. market and has sold 1,200 car units to ATT.

EDITED BY ALAN CANE

In Japan, cellular radio is being introduced in two parts, a "high capacity antomobile telephone system" (HCATS) for larger cities and a "medium capacity cell site system" (MCCSS) for less populated HCATS has been under devel-

opment since 1967 and went into commercial use in the Spring of 1979 in Tokyo, Services using MCCSS have been on trial in rural areas aince September 1980. At March this year, some

13,300 subscribers were using the service, for which there is an installation charge per mobile of Y80,000 (£200), and other initial charges of Y80,800 (about £77). Typical charge for a call is Y10 (about £.5p) for 6.5 sees over 160km in the day-

In Japan there are in addition to the 13,300 mobile units some 14m pagers, 456 speech terminals on railway trains and about will make similar approaches to total radio market is worth

DISPLAYS Gauges that can be

read without fatigue

FOR MECHANICAL inspection 200 mm and there are 210 seg-departments, the Electroline 80 ments per channel. The measur-gauging system from Thomas ing range of the units, which of St Albans (0727 55313) has a pair of gas plasma displays that allow operators to make fast, accurate repetitive in five steps, giving a resolution

readings without fatigue of 0.15 micr The gauges act rather like a sitive scale. mercury-in-glass thermometer. More sophisticated versions
Banked aide by side the units of the results allow the display form a gauging centre which.

work from any standard Mercer probe, is switchable from ±1500 microns down to ±15 microns of 0.15 micron on the most sen-

of the gauge allow the display provides a histogram display to be frozen at the last reading showing et a glance vertations and for "run-out" reedings to in machined dimensions.

Height of the gauges is lar parts. to be frozen at the last reading

Contract Research & Development-Contact IRD

International Research & Development Co Ltd Fossway, Newcastie upon Tyne NE6 2YD

Testing Ultrasonic inspection

THE SIZE of service-induced cracks and similar defects found in key plant components can be determined using a new service intro-duced by the Non-destructive Testing Centre at Barwell (0235 24141).

The service is based on the

application of an nitrasonic time of flight (TOF) tech-nique which has been pioneered at Harwell for thick plate and weld inspection. The Centre has recently developed a transportable TOF equip-ment enabling staff to earry

nnt on-site inspections for in-onstrial customers. distrial customers.

Both surface opening and isternal cracks have been accurately sized using the TOF technique, which involves accurately measuring the time of separation of ultrasonic

waves diffracted from the crack tips.

The service should be of particular value to plant engineers confronted with the ifficult task of distingui between cracks that can be telerated with adequate margins for safety and those that require urgent attention.

Office systems Tektronix copier

TEXTRONIX HAS announced a new colour graphies copier that uses ink jet technology to produce eight-colour copies from computer graphics

Known as the model 4641 the unit is aimed at applica-tions such as simulation. design previewing, stress analysis, ultrasonic scanning and surface modelling, all of which generate complex plots that need colour to aid clarity. The copier, which is priced at about. £10.000, products both A3 and A4 sized copies. Images can be in a horizontal or vertical format in each size and multiple copies can be produced under programme control. More on Harpenden.

المكذا موالاصل

Financial Times Thursday December 16 1982

FINANCIAL TIMES SURVEY

Thursday December 16 1982

Thames Barrier

End to threat of catastrophe

BY LYNTON McLAIN

FIFTEEN matter-of-fact words, written last month by Mr John Holloway, the deputy project manager for the Tbames Barrier at the Greater London Council, marked, io a supreme under-statement, the final stages of one of the greatest, most expensive and ingenious engineering projects seen in Britain since the Second World War.

London one day.

getting this historic statement swiftly to the GLC public services and fire brigade commirtee.

These few words encapsulated three decades of talking, besitating, decision, indecision by bearred debate that hed been realized to the statement of finally statements.

earlier participants, and finally

1175 7000

of enormous importance to the people of London and Mr. Holloway's straightforward, barrier worked gave no hint of the disaster that could not now

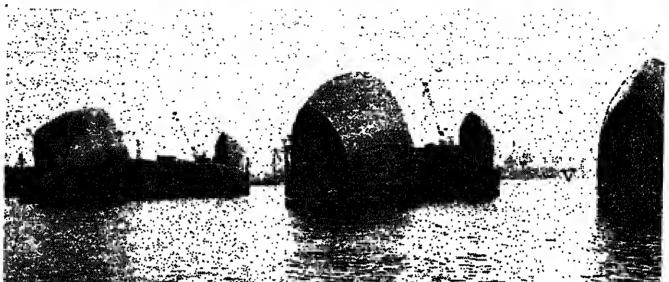
hit London.

sive and ingenious engineering projects seen in Britain since the Second World War.

The flow of the River Thames was stopped for the first time in its history on October 31, 1982 after the first full trial of the £450m Thames Barrier, backed by its £283m of downstream flood defences.

"The barrier can therefore be said to now provide an effective flood defence of London," Mr Holloway wrote on behalf of Mr Derek Ayres, his director of public health engineering, splitting an infinitive en roule to gerting this historic statement swiftly to the GLC public ser-

going on for centuries about the risks of flooding in London,
One of the earliest records is in the Anglo Saxon Chronicle of 1089; "This year also, on the festival of St



At a cost of £730m London has been secured against the danger of catastrophic floods. It is a small price compared with the estimated £3:5bn such flooding would have caused in damage to property and life and disruption of the capital's transport and other services

reprincipants, and finally and some participants, and finally and he risks of flooding in London. Act of Parliament 10 years ago which confirmed that a barrier would be built to straddle the Thames at Woolwich.

Confirmed

The words confirmed that the Thames Barrier did work as it was designed to a decede ago. The engineers and planers, and analysis and finally and successful the planers and planers, and analysis showed the strates the final strategy of Agriculture, Fisheries and Food which successful the partier, expected no less.

The event was nevertheless

The words confirmed that the Thames Barrier and Pood which successful the partier, expected no less.

The event was nevertheless

The words confirmed that the Thames Barrier and Food which successful the probability of flooding in London adverse conditions could have are raised the river waters over the less than 10 years ago which confirmed that the standal of the risks of flooding in London above conditions could have been under eight of the statute book, the Government of the statute book of the statute

THAMES FLOOD DEFENCES

GLC Thames Barrier, Woolwich	rier, Woolwich 88 to 88	Final forecast 450	Total Spent 352	t grants
GLC nther flood defence works	37	73	52	38
Grant in GLC as contribution to water anthorities to counter " reflected tidal wave " from barrier	-			15
Anglian Water Authorities	59	105	87	66
Snuthern Weter Anthurity	32	72	56	35
Thames Water Anthority	16	31	29	17
TOTAL	232	732	576	436
Sonree: Ministry of Agriculture	, Fisheri	ies and	Food,	December

and of this £436m was in the engioeering contracts. turm of direct, non-repayable Government grants. The Thames Berrier at Wool-

wich accounts for £450m of the £732m final total. The GLC estimates that 60 per cent of the increase of the Barrier cost has been caused by inflation. Of the balance of 40 per cent, a quarter is attributed to changes and Improvements to

the original design. The remaining three-quariers is put down equally to industrial disputes and the extra cost involved in overcoming technical difficul-

An Anglo-Dutch consortium, Costain - Tarmac - Hollandsche Beton Maatschappij (CTH joint venture) won the main civil engineering contract, with the proviso of reviewing the con-tract price after two years, CTH Joint Venture estimated that it would cost (at October 1973 prices) £38m for the civil engineering work. The final bill for this part of the Barrier is likely to be nearer £250m at current prices.

Estimates

Part of the problem facing the GLC, the Government and above all the companies which tendered for the initial civil and mechanical engineering contracts in the second half of 1973, was the ropid escalation in oil prices, the three day week in Britain and feers of runaway inflation.

The GLC believes that CTII Joint Venture underestioated substantially the cost of the work and the likelihood of technical changes. By the time work started revised estimates put the starting cost at f70m almost double the original tender price.

The main contracts outside

in Britain and feers of runaway inflation.

Only three tenders from prospective contractors for the heavy civil engineering work were submitted. Not one of the returned tenders was unqualified. There were particular reservations about the cost effects of industrial relations and excessive Iofiailon outside the terms of the standard Barrier Consortium (DCBC).

Baxter indices used for civil

CONTINUED ON PAGE III





The people who built the Thames Barrier.

THAMES BARRIER II

Who picked up the down time in the middle of the night,

and supplied pressure tested flexible hoses and their couplings?



LITTLE HYDROSAURUS

Never heard of Hydrosaurus? We're not surprised - they're difficult to find. The Hydrosaurus is an endangered species believing in fast service- and protected in Windsor by

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Prodorite are proud to be

What happened the last time London was hit by floods

THE THAMES Barrier will, by coincidence, begin its vital task of protecting London exactly 30 winters since the South-East was last attacked by serious floods.

Winds during January 1953 had been surprisingly light for the time of year. But the weather changed dramatically during the last weekend of the month. Gusts of up to 112 miles an hour hit Scotland and began speeding south. The first major casualty in what was to prove a weekend of disaster was the ferry Princess Victoria, which went down in the Irish Sea with the loss of 128 lives.

Within hours of the loss of

the ferry the East Coast from the Humber to the Thames Estuary and the riverside boroughs of East and South London were devastated by

flooding as the winds com-blined with high tides.

More than 300 people died during the 1953 floods. An estimated 30,000 people were forced from their homes many of which were destroyed. There were 500 breaches in the sea defences and the financial extent of the losses was estimated at the time by Sir David Maxwell Fyfe, Home Secretary, to be between £40m and £50m. In the Netherlands the effect of the weekend's flooding was

even more devastating, with the death toll rising well into four figures.

Coincidences

Yet a slightly different comhination of meteorological coincidences could have made the 1953 disaster overwhelmingly worse. As It was, the worst-effect of the flooding in the London area was al places like Canvey Island to the Estuary. Slightly different winds could have sent the tide surging up the river to London itself, creating just the disaster that the harrier has been designed to prevent. While the capital escaped

the worst of the 1953 damage, its population came close enough to the danger to appreciate what a full-scale flood would do to their etty as smaller rivers and streams feeding the Thames everflowed Boats took to the streets of West Hain where nore than 1,000 families were forced from their home... Blackwall, Wapping and Whitechapel . . many main roads were impassable, railways were flooded and the Snrrey Docks wall was breached the liver wall breached . . the tiver wall-hreached at Belvedere, near Woolwich, where the barrier

has been hullt . . . the Grand

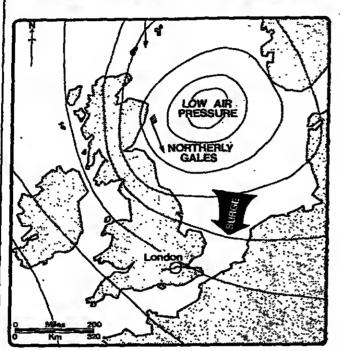
Surrey Canal overflowed at Camberwell and Peckham . . . crowds all along the Thomes embankment watched as the river rose level with the road. M. Chelses and overflowed at

That year was not the only time that large parts of London have come close to destruction from flooding. There were severe floods in 1236 and 1663; 14 people were drowned in Hammersmith and Westminster during 1928 flooding. Other major aleris have taken place since the 1953 floods. In 1965 the inches of flooding over the

ziver walls in central Landon In 1971 householders near the river were again warned that their homes might be flooded. Alerts have continued since the barrier was commissioned. with the danger of floods in January 1976 and again two

years later. The statistical probability is that the Thames will rise above its flood defences about once every 50 years. But because tides are rising, so is the chance of a serious flood. The threat against which the barrier has been built to protect London is a very real one indeed.

Alan Pike



Left: How cyclonic winds build up a tidal surge in the North Sea which funnels with increasing intensity into narrows between England and the Low Countries. Right: An imaginative photo-montage by Avon Rubber of the scene Big Ben might have looked down on had a great flood happened.



Lynton McLain reports on why man is powerless to stop prime causes of rising tides

At the mercy of the forces of nature

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THE THAMES Barrier has the level of high tide at London century.

Bridge (the traditional measurement and ing point) which is made worse forecasts of river engineers in the capital are to be believed. The North Sea into the Records going back 200 years

THE THAMES Barrier has the level of high tide at London century.

Man is powerless to slow down or stop the prime causes of this increase. It is so inextonable and, on past levels, so predictable that the environs of the tidal stretches of the the capital are to be believed. the No Records going back 200 years Estuary, have proclaimed the inevitability of catastrophic flooding has been if nothing were done to protect the capital. Behind this inevit-

High tide at London Bridge has been rising by about 0.73 metres a century, about 3 in every decade since records

of the tidal stretches of the Thames could have been flooded by the ever-rising high tide alone by about the turn were started in the late 18th this century without the har-rier and its associated downstream river bank protection

The increasingly high tide are largely the result of London sinking slowly into its bed of clay. This in turn is caused by the slow but measurable tilt that Britain as a whole is under-going, with Scotland slowly rising and the South-East slowly sinking as the Scottish High from the ending of the last Ice

This downward tilt by the South-East is estimated at about a foot a century. It causes the waters at high tide to lap ever closer to the tops of the banks. The end of the century date ls deduced simply from an extra-polation of historie tide data at London Bridge going back to 1780. The data shows a steady increase in high tides to a level which would breach the interim tidal flood defence level of 5.8 metres, just over 18 feet, established along the river hanks in

It is misleading, however, to think in terms of any specifie date for a disastrous flood of

This is partly because the rea-London are more complex than the simple sinking of the Souththe simple starting of the south-East, partly because tidal surges from the North Sea carry the greatest threat of flooding (especially when combined with high tides) and partly because planners and engineers involved in flood defence work blacks. in flood defence work think in terms of probabilities of catastrophic flood risks and do not forecast specific dates.

The other factors, hesides the sinking of the land, involved in standing London to experience steadily higher tides over the years include the effect of greater water depths in the oceans caused by the melting of the ice cap and dredging operations in the Estuary to improve the navigation channel. The lat-ter increases the speed of move-ment of the tidal inflow. At the same time the improved flood defences in the lower Estuary restrict the spread of the incoming tide over the riverside salt-

High Tides

While these are the main causes of the rise in high tides, the greatest single threat to London from exceptionally high tides occurs when the level of a high spring tide is increased by a surge from the North Sea. These surges are born amid the low atmospheric regions over the North Atlantie. When they move north of Scotland and into the North Sea and when the wind drives the raised water south towards the east

cost of Britain, London is at This is especially so as the raised water approaches the Channel and the Estuary, where the shallower water of the Continental shelf and the funnelling ffect of the Estuary and Channel raise the water level even

Surges of up to 3.5 metres, ilmost 12 feet, have been recorded and this has given rise to exceptional water levels at high tide. Fortunately and somewhat paradoxically how-

ever, there is an unexplained interaction between a tide and

a heavy surge which prevents them coinciding. Otherwise the extent of potential flooding would be even greater than it is

Steady increase

Statistically the ebances: flood waters reaching the tide levels which gave rise to tho 1953 East Coast floods, when 300 people died, are put at once in about 56 years in 1972. In 1953 the tide reached 1.98 metres, ahout six feet shove the pre-dicted astronomical tide level. The date, 1972 in this case, has to be given for the probability because of the steady increase in the levels of high tide.

Severe flooding of London is not a feature only of the past 30 years or so. Records of severe floods go back at least as far as 1236 when the river over-flowed and people had to take to boats in the Palace of West-In 1663 Whitehall and other

roads in London were flooded. Samuel Pepys described it as "the greatest tide that ever was remembered in England to have been in this river all Whitehall having been drowned.

Central London was flooded last in 1928 when 14 people drowned in their basements in Hammersmith, West London, and at Westminster.

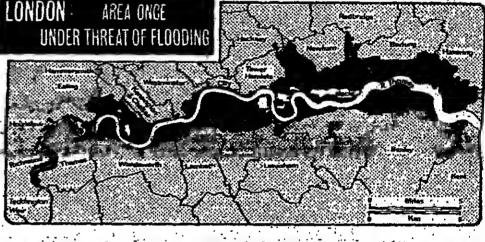
Exceptionally high tides came again in 1965 when water lapped six inches from the top of river walls in central London. In January 1976 London fored the threat of an 8.5 it surge tide; the danger was only diminished because the surge from the North Sea coincided

with low tide.

Most recently, in January 1978, 82 miles an hour northerly winds helped raise the Thames to within 2 ft of the top of London's flood defences.

But action was already well under way on the Thames Barrier at Woolwich by the time these more recent flood dangers hit London. The initial action that led to the go-shead for the barrier came after the 1958 flood disaster with the report of the Waverley Committee in

report recommended that: " In regard to the Thomes investigations should be under taken urgently into the possi structure,



the maximum water levels bigher up the river at the time

These words, in effect, overranse words, in energy, over-came the psychological burdle that had prevented dramatic action in the past. No longer were people afraid to state that dangers of flooding of the capital could only be prevented by building the physical means to stop the Thames.

Little, or nothing was done, however, until the 1960s, when two events once again, stimulated dehate and further in-quiries into the risks to London, In 1962 100,000 aeres in the Hamburg area of West Germany were flooded and 300 people died, after a four-metre (approximately 12 ft) North Sea surge tide swamped the land. Three years later came exceptional high tide in

It still took two more years, until 1967, for the British Government to set. It appointed another inquiry when the Ministry of Housing and Local Government asked Professor Hermann Bondi (now Sir Hermann Bondi), who was then professor of mathematics at Kings College, London, to report on the cost benefits and the probability of flooding in

Professor Bondi's words, as perhaps befits a leading mathe-

with a creater sense of urgency than the long-forgotten Waver ley report of 14 years before. He concluded that tidal floodin London would be a disaster of such magnitude that it could

not be allowed to happen Investigation

This unequivocal warning forced the Government to start the ball rolling towards a physical barrier over the Thames. The Government Thames. The Government asked the Greater London Conneil to do a detailed investigation of flood defence

A range of alternative schemes was studied by the GLC Physical and mathematical studies focussed on a for a rising sector gate barrier at Silvertown in Woolwich Reach. This is the design which

is now operational at Woolwich The erucial standard adopted by the designers was based or a defence against a high surge tide level of 6.9 metres (23 feet) which could be expected

to occur in the year 2030. The GLC was authorised to carry out the work hy the Thames Barrier and Flood Prevention Act 1972. So altros 20 years after the Waverley Report recommended studies a physical parrier over the river

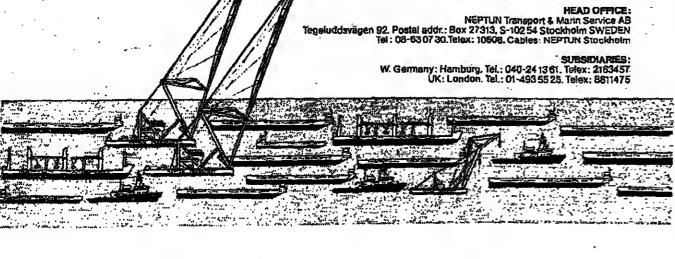
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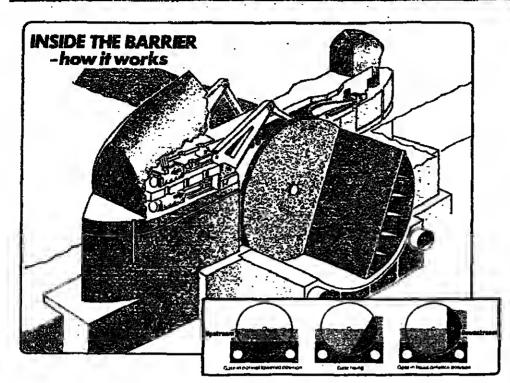
The picture shows Neptun's selfpropelled floating sheerlegs HEBE 2 and HEBELIFT 3 lifting one of the gate

The Neptun Company has the know-how and the resources to take on great challenges - heavy

lifts, difficult wreck removal jobs, complicated transports and demanding salvage operations.

tion of the Thames Barrier, built to protect London from the threat of catastrophic flooding.

arms into place. (24.5 m in diameter, 1.5 m thick, and weighing about 1,300 t)



End to threat

CONTINUED FROM PAGE I

The design chosen to protect London from storm surge lides was the novel "rising sector gate" design patented by Mr R. C. (Charlie) Draper, an engineer with Rendel, Palmer and Trition, who held the patent with Sir Bruce White, Wolfe Barry and Partners, consulting engineers.

sulting engineers.

The futuristic design involved a series of movable barriers across the river, formed by 10 separate gates mounted between concrete piers. These piers are founded in the chalk or Thanet sand strata, 45 ft beneath the river bed. Four central openings of 61 metres are provided to allow access for shipping. The four main openings are to allow access for shipping, the east coast as far as Aberdeen will monitor sea
flanked by subsidiary 31.5
metre openings with rising
sector gates. The four remaining openings are non-navigable
31.5 metre conventional falling
radial gates.

The hydraulic rams and their
power packs which raise the
flood prevention gates from the
the east coast as far as Aberdeen will monitor sea
conditions.

Regular training exercises
will be carried out with a complete closure of the gates once
every month. Each gate will be
raised separately once a fortnight to stop river silt cloggingup the works and impeding gate
movement.

Mirrlees Blackstone diesel electric generators. A further safeguard is that any one ram can operate a gate, although normally one ram at each end of the gate will do the job.

Computers will be used to help predict the onset of a threatening storm surge tide and the main warning system will be the Storm Tide Warning Service of the Meteorological Office at Bracknell.

The duty officer at the Thames Barrier will get the six

The duty officer at the Thames Barrier will get the six hour weather charts from the Mel. Office and with the aid of tide level warning gauges up the east coast as far as Aberdeen will monitor sea distorts.

Centre on the south bank is finished in time for the official opening next autumn.

These are the spin-offs for the future, but during peak activity of the Thames flood prevention programme in 1980 an estimated

tors were working to the design of the proposed Thames Barrier produced by Rendel, Paimer and Tritton, consulting engineers, working with PHE Engineers. This team of consulting engineers was strengthened by senior staff from the GLC's departments of architecture and mechanical and electrical engineering.

The design chosen to protect London from storm surge lides was the novel "rising sector gate" design natented by Mr.

These are the most distinctive part of the Barrier and were manufactured, transported and erected by the Liverpool company Tysons (Contractors). Inside, the shells look exactly like upturned Viking ships complete with curved ribs of European redwood. pean redwood.

They are likely to win an award for their design and will appeal to the thousands of visitors expected to visit the Barrier site once the visitors' centre on the south bank is finished in time for the official

programme in 1980 an estimated 4,500 people were involved directly on the sites, of which 2,400 were at Woolwich.

The local community has expressed its thanks by naming the nearest public house to the project. The Thames Barrier Pub.

Alan Pike on the big names in the project

Engineering triumph for the team

HUNDREDS OF companies and other organisations were in-volved in bringing to fruition the project to secure the flood defences of London.

The operation must be seen as a total flood defence system
the main barrier could not
deflect a flood tide without the deflect a flood tide without the support of the subsidiary barriers and bank-raising work which has also taken place. But the main barrier is understandably the outstanding feature of the project. With all deference to the contribution of suppliers of apecialist equipment and services, it will tong be associated with the names of the companies which carried out the main civil engineering work and supplied the giant gates.

For the main civil engineer-

For the main civil engineering contract three tenders were received by the Greater Lon-don Council which met the council's criteria that the work must be carried out by an organisation of proven background and sound financial standing. The council was also standing. The council was also anxious that the barrier should not form a disproportionately large part of the contractor's total turnover.

An Anglo-Dutch consortium consisting of Costain Civil Engineering, Tarmac Construction and Hollandsche Beton Maatschappii (HBM) was chosen from the three finalists, two of which were consortium bids. The three partners set up CTH Joint Venture to handle the project, the chairman of which has been Mr John Reeve, chairman of Costain Civil southern half of the new flood defences. Engineering.

The partners to the joint ven-ture decided to operate on a fully integrated basis rather than divide the work into three parts with each company operat-ing in relative isolation from the others. Staff from the three

would otherwise have had to acquire especially.

Despite the early industrial relations and learning-curve

relations and learning-turve problems experienced at the Thames Barrier site, it is agreed all-round that the CTH partnership worked well expertise galned by the three companies, plus the experience of working fruitfully together.

of working fruitfully together, means that further joint vanture bids must be considered likely when future suitable marine projects—like the Severn Barrage—go ahead.

The civil engineering contract was awarded in July 1974 but it was the following January by the time the workforce and plant had been assembled and plant had been assembled and work began at the barrier site. A large amount of temporary work, like the building of jettles and platforms, had to be completed before work on the permanent structure could go

Complication

Throughout the building of the barrier the contractors faced the complication that the Thames had to remaio open to shipping at all times. For this reoson initial construction work started only on the southern bank, with river traffic diverted through a channel on the north. The intention at this stage of the project was that when construction of the southern half of the barrier was complete defences.

defences.

However, anxiety by the Greater London Council to speed up completion of the barrier, which fell considerably behind schedule during the early phase, coupled with changing patterns of shipping in the Thames enabled this work pattern to be modified. By 1979 the Port of London Authority had agreed that shipping could be limited to the width of one of the barrier's main deepwater gutes—

were under construction, pre-cast concrete sill units were built in a nearby dry-dock and then towed to a mooring place until they were required. As each coffer dam was removed from position a channel was dredged in the river with the use of a backhoe excavator capable of digging 10. 30 m. The sill units were then jacked down into position hydraulically.

Mcarwhile a second consor-tium, consisting of Davy-Loewy and Cleveland Bridge had formed the Davy Cleveland Barformed the Davy Cleveland Barrier Construction with responsibility for producing the barrier gates and machinery. Davy-Loewy supplied the machinery and hydraulic equipment while Cleveland Bridge produced the gates and took responsibility for installing both the gates and machinery.

The barrier has 10 cates—

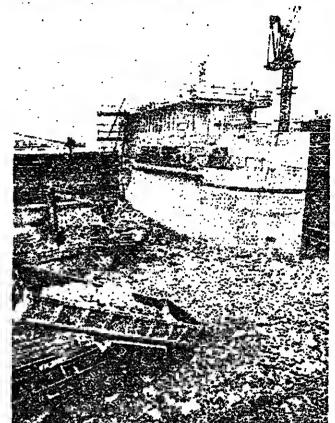
The barrier has 10 gates—
four main rising sector gates which each weigh 3,200 tonnes and, with their 200 feet span, equal the opening of Tower Bridge, two smaller rising sector gates weighing 900 tonnes each and four "20-tonne falling radial gates for the flanks of the barrier. When the gates the barrier. When the gates are not in use they lie horizontally in their pre-cast concrete sills.

concrete sills.

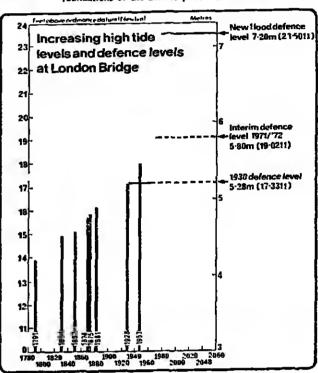
Each gate was manufactured at Cleveland Bridge's Port Clarence, Teesside, works and then floated to the Thames for installation. The rising gates arrived in three sections consisting of the gate span which goes between two concrete piers
and two gate arms which are
attached to each end of the
span and are pivoled to the
piers.
Two rocker beams were posi-

tioned on each pier before installation and these were later the others. Staff from the three companies were seconded to what became a relatively autonomous organisation.

HBM, with first-hand experience of Dutch flood defence problems, was able to contribute not only outstanding expertise about some of the problems which were to be confronted in the barbante of the width of one of the problems which were to be confronted to the gate arms to work pattern to be modified. By 1979 the Port of London Authority had agreed that shipping could be limited to the width of one of the barbante of the problems which were to be confronted to the gate arms to the gate arms on the piers and the gate arms on the prostion the sample of the problems which were to be confronted to the gate arms to the arms on the piers and the gate arms on the piers and the gate arms on the problem arms to the arms to



Temporary coffer dams were used to hold back the water while the



Records going back 200 years show that the level of high tide at London Bridge has increased steadily and is set to continue increasing.

Though it's made London safer, Louis it's still a majorrisk.

We've always looked upon the Thanies barrier as something of a liability.

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THAMES BARRIER IV

Lynton McLain tells how the final design was selected

Model of robust simplicity

ELEGANCE and robust simplicity are some of the words used by visiting engineers when they describe the design of the Thames Barrier.

It has also been called an beroic" achievement, the eighth wonder of the modern world," descriptions reviving thoughts of the scale of projects which made Britain's name as engineer to the world in times

The Barrier is for the present and certainly will continue to rank as a showcase of British (and Dutch) civil and mech-anical engineering skills into he foreseeable future, especithe foreseeable future, especially so on the crucial day when its design is tested to the full in the teeth of a North Sea surge-tide funciling down the

The immediate impression the visitor gets is of a series of stylish, curvaceous covers of crinkled stainless steel straddling the Thames like a clutch of miniature Sydney Opera

"elegant." but Mr Ray Horner, the "father" of the Thames Barrier, has likened them to a series of "trussed chickens, covered in kitchen foil." Such covered in kitchen foil." Such is his good-humoured affection for the project which he admits had taken a third of his working life. Mr Horner, now retired, was the chief officer at the Greater London Council's descriptions of rubils health the Greater London Council's department of public health engineering who organised the original feasibility studies into a barrier and eventually let the contracts for the work to begin at Woolwich.

Ingenious

Beneath the shimmering reflections of the stainless stee covers lies an ingenious technical solution to the problem of countering the mathematical certainty of an eventual catastrophic flood in London. The solution chosen for the design of the barrier, the "rising sector gate" design unique.

It is simpla in concept if not in execution. A barrier, or gate, is made to lie in a curved concrete sill on the river bed when there is no flood danger. The gate is attached to two circular "arms" at right-angles to the long gate, flat one side, curved the other. When a flood is imminent the circular arms are made to rotate by hydraulic rams hidden under gates rise slowly in an arc from the river bed sills through 90 degrees to hold up an imposing total of 15,480 tomes of steel

against the surge tide.
This idea for the design of the barrier came from the lateral thinking of Mr R. C. Draper, an engineer with Rendel Palmer and Tritton, the Rendel Paimer and Tritton, the consulting engineers on the project to protect London from floods. He saw how an ordinary domestic gas tap opened and closed and in a concept sketch to his senior colleagues dated October 7 1968 be noted modestly: "I think this could have possibilities"

modestly: "I think this could have possibilities."

It has had more than possibilities, for the barrier exists because of this concept, although many more people in addition to Mr Draper were involved in the detailed design. The patents for the design are held by Mr Draper, Rendel Palmer and Tritton and Sir Bruce White Wolfe Barry and Partners, consulting engineers who worked together on the who worked together on the barrier design, on the instruc-tions of the GLC, after they bad each submitted a range

of contrasting schemes.

Before this stage a Government - appointed committee under Viscount Waverley pro-posed in 1954, a year after the fatal East Coast floods, that a physical flood barrier should be built across the Thames at Long Reach, Dartford.



cluded steel tanks laid on the

river bed and capable of being raised to block the flow, and a

design based on steel tanks with a vast rubber sheet to be

stretched across the river to take up the shape of the flow.

A further novel design called

for a horizontal retractable bar-rier. Two enormous 700 feet girder-like structures, one on

each river bank, were to be rolled ont into mid-stream on a

specially prepared track on the river bed. At 7,000 tonnes

apiece the structures were con-

celved on a massive scale. But

By 1970, two years after the

this, like the other initial ideas,

study the problem under an exercise funded 50 per cent by

the Government, it was agreed that the "right answer" was a

drop gate design erected at Woolwich Reach, upstream from

The "drop-gate "design was

Government bad asked Greater London Council

was dropped.

Rendel Palmer and Tritton and Sir Bruce White, Wolfe Barry and Partners were then appointed to suggest jointly bow the physical barrier should be built and what the feasible technical options were. This joint approach did not always work smoothly. Eventually the two consulting engineers sub-mitted separate reports.

The problem, as defined in those early days of the project, was to build a barrier with two main openings, 500 ft acros for shipping access and two minor openings, 250 ft across, straddling the river at a point whare it was 2,000 ft wide.

The Rendel team favoured a drop-gate design looming large 200 ft over the river. Each of the grate attraction of the grate o

the gates attached horizontally to a girder structure would have been lowered from massive towers in mid-stream, to the river. The gates would then have been moved through a right-angle to stop flood tides. The team from Sir Bruce

White favoured a swing barrier design, where the barriers were at all times in the river, parallel to the flow at times of no risk, and moved through right-angles to block the flow when flood danger was imminent. The de-sign was later thought to preing in the centre of the river, considered essential for ease of

The Port of London Authority stood firm on the need for a wide navigation channel but the GLC aware that the Surrey, London and St. Catherine's Docks had already closed and caused a drop in river traffic, pressed for four openings each of 61 metres (about 180 feet). The GLC was sure that the West India Docks would soon also be

closed.
The GLC favoured more an smaller openings because of the inherent advantage this gave in protecting the capital in the event of one, large single gate failing.
The joint team of consulting

engineers was again involved to advised the GLC investigation. This was the moment Rendel Palmer and Tritton, through Mr Options discarded quickly in-

Palmer and Tritton, through Mr. Draper, had the idea of a "rising gate" design.

The design has been likened to a beer barrel with most of its staves removed, leaving two circular end-pieces and a relatively narrow flat length—the gate—stretching between the two discs.

The GLC was immediately, attracted to the design. It had the virtues of offering a "simple, robust structure, with good maintenance, high strength and multiple openings," Mr Horner

multiple openings," Mr Horner said. The London boroughs affected by the proposed harrier also liked the design, especially Greenwich, which had vigorously opposed the earlier drop gate designs with their inevitably massive towers. These would have dwarfed the historic naval

buildings at Greenwich.

The idea of the rising sector gate design "gelled" at the GLC and council officers were able to get on with the detailed design work early in 1971 which led up to the Act of Parliament, the Thames Barrier and Flood Prevention Act 1972, which the council powers to build a physical barrier over the Thames at Woolwich based on the rising sector gate design. The Act also ensured Govern-

able to include a 450 feet oper



gate for lowering to dose the main navigation channel

Essential works downstream

THE BARRIER is the undis Thames and would have marred puted centrepiece of the the beauty of London's river puted centrepiece of the the beauty of London's rivercapital's new flood defence systems. But without £280m of river to explore London.

work downstream of the barrier,
the expensive rising sector gates
and flood warning systems of The two metres (approximately
the main barrier would fail to six feet) river bank raising was also
ruled out on technical grounds.
The two metres (approximately
the main barrier would fail to six feet) river bank raising
the contract of the contract contract called for to protect London
able areas of east and south

areas of east and south

of river walls and embankments is the traditional approach to been no exception, in 1879 the Thames Flood Act allowed the building of river bank defences along stretches of the river. After the flood of 1928 the banks were raised again, between 1930

were raised again, between 1930 and 1935.
This was the last major wall raising until 1971, when banks were raised by an average of 16 lnches from Putney in the west to Erith in the east, with 50 miles of bank raised. This improved the level of protection against overtopping from a risk factor of one in ten to one in 50 in any one year. The work cost £4m and was aided by the Gov-ernment at a rate of 65 per cent.

ward wall raising has the advan-tage of producing a permanent and easy to maintain food defence. The disadvantage of wall raising, when used as the defence, is that aesthetic and technical problems are created. So it was in London. Pro-longed and intensive research by the Greater London Council, showed in the early stages of planning for the Thames Barrier, that the traditional approach of bank raising had

the river walls and embankments without a cross-river only if the walls were raised some six or seven feet (1.8 to

Ever-higher river walls would have shut out the views of the

practical increase in the height of earthen river banks on the

weak foundation materials along the river estuary. These factors made it almost inevitable that the GLC would decide on a movable barrier, to be built in parallel with a coordinated programme of down-stream bank strengthening with bank raising where neces-sary and smaller barriers to block-off creeks and river out-lets throughout the area of risk.

Contribution

Flood defences downstream of the Barrier to the mouth of the estuary bave been carried out by the Thames, Anglian and Southern Water Authorities. This relatively straight for The GLC made a contribution of £20m towards the work in-cloding 12.5 miles of GLC-

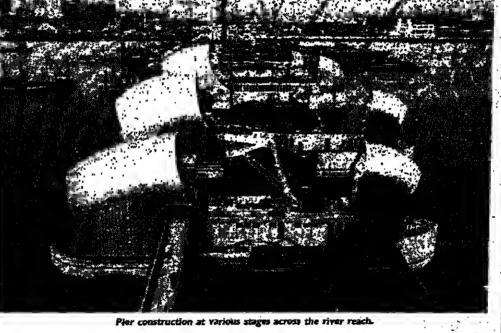
One of the most spectacular smaller barriers downstream is
the Barking Creek Barrier, a
massive E15m drop-gate design
built for the Thames Water
Authority. The gate was formally inaugurated by Mr Peter
Walker Minister of Agriculture,
Fisheries and Food, in Grober.
Thames Water was responable for just over 25 miles of
tidal defences on the north bank
from Barking to Thurrock, built
for E30m, and aided. like the its limits.

Its limits.

from Barking to Thurrock, built for £30m and aided, like the ties, to the extent of 85 per cent of total cost by the Ministry of Agriculture, Fisheries

The Barking Creek Barrier This environmentally insensitive scheme was ruled out because bigher walls would "destroy the attraction and character of the river," the Col. C. St. Binnie and Partners.

Lynton McLain



Final labour agreement cut years off timetable

main civil engineering contract contained conditions which demonstrated that no contrac-tor was prepared to accept without restriction any responwithout restriction any responsibility for the consequences of industrial disputes. The contract eventually reached with the Costain-Tarmac-Hollandsche Beto Meatschappij (CHT) con-sortium limited its responsi-bility for disputes to 21 days full stoppaga of the site be-cause of strikes in each of the first two years, with the cost of any further losses to be treated as an additional item.

Mobilisation of the workforce and plant at the site took the best part of six months and construction activity began in earnest early in 1975.

Hindsight

In the early stages of the contract the timetable slipped back seriously because of a mixture of direct industrial relations problems, difficult physical working conditions and the time taken in training workers who (in many cases) bad no previous experience of a heavy vious experience of a heavy marine project. Englieers associated with the operation discovered with hindsight that an initial decision to organise the workforce on two 12-hour shifts, rather than three turns of eight hours, also depressed

In 1977 it was decided to the barrier operational by the move to a system of three shifts end of 1982, accompanied by

BiG CONSTRUCTION projects of eight hours. This gave rise and industrial relations problems are apparently indivisible and concern over the likely of the project. Although some effect of disputes was displayed from the earliest days of the project. Although some through the earliest days of the project. Although some time through the project and the project and the development of the disputes and avoiding restrictive practices. Most important, it also offered incentive payment arrangements tied to key dates in the development of the disputes and avoiding restrictive practices. Most important, it also offered by proposals for a substantial incentive payment arrangements tied to key dates in the development of the disputes and avoiding restrictive practices. was rejected by the workers on tha site and a two-month strike brought work to a balt. This eventually ended when an arbi-tration award supported the proposed three-shift arrange-Incentive

During the later stages of the contract CTH accepted full responsibility for the consequences of industrial disputes and a completion date bonus the company's contract with the Greater London Council

To benefit from this arrange-To benefit from this arrangement the consortium had to avoid any repetition of the industrial relations problems which had characterised the earlier stages of the project. Productivity had begun improving after the move to a three-shift system, and a period of industrial relations harmony which contrasts with the earlier difficulties was cemented by what became known as the by what became known as the

Green Book agreement. This General Conditions of Employment agreement, issued to all employees in a green-covered booklet which gave it its name, was reached between the company and union leaders in March 1979. It has been estimated that it saved anything between one and two years in completing the barrier.

The agreement set out a target timetable aimed at making

Incentive payments took the form of lump sums of £500. At each of the seven payment stages between July 1979 and August 1982, part of the workforce—1,400-strong when the scheme was introduced in 1978 -became redundant as the barrier neared completion.

Strict efforts were made to enforce an effective safety policy during the construction of the barrier. For a project of its nature the safety record on the barrier is considered good but there were, none the less, two fatal accidents during the civil

Alan Pike

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Art

THE ARTS

Student opera in the U.S.

Kallman, new scenario and action by Altman—need not delain us long. Altman bad brought in his movie and Broadway collaborators to light and design. It was the most lavish and spectacular Roke 1 bave Andrew Porter reviews

cessantly. Anne crisply com-mitted Tom there at the start and then disappeared until the end; a "dream Anne." one of the madwomen, played her role

during the opera proper.
Was it flashback or nightmare? Nothing made much
sense, since it contradicted both
the music and the text. The
brothel scene was a lewd,
childish flashing at the audience of enlarged tits, bottoms, and other private parts, and simula-ted copulation in various posltions. It closed with a realistic guilloline sequence for "cut off her head."

At the auction, Sellem sold off stewed hunks of Baba; her concertoto," and replaced it music was sung by a disembodied live bead. It was carefully rehearsed and rather brilliantly executed: a big-scale, alert, enthusiastic, expensive,

and expanding the aims of the post-war reformer, André Mal-raux. In 1959, Malraux stated

works of art.
The cultural ruhric of the

present arts minister, Jack Lang, director of the Festival

seeking to contribute . . "au

bul the stalement of a distinct

objective. The French are deeply concerned by the pro-gressive Americanisation of the

des cultures du

English song: one of the

accompanied recitals 1 have ever enjoyed.

As is well known, Verdi grew dissatisfied with and recomposed two passages of Folstoff after the first night and after a vocal score had already been published. One was a 16-bar lyric outpouring from Nannetta and Fenton, behind the screen (with patter around the basket and from Ford's muster), in the second-act finale; the other the close of Act 3 Scene 1. The pages were torn from the autograph; the prinled scores were altered. More than one commentator bas regretted the loss of the first episode, a soaring, barmonically adventurous arch of great beauty. Verdi removed of great beauty. Verdi removed it because he feared the finale had become "too much of a concertoto," and replaced it with six bars of rather neutral

Funding the arts in France

Rosalind Carne

creation among France's ethnic

minorities, who are mainly

rencontres entre créateurs et intellectuals privilégiera le dialogue Nord-Sud, la latinité la communauté méditéraneene

Two university productions merit international review for different reasons: a Roke's Production of a masterpiece. The different reasons: a Roke's Production of a masterpiece. The Copera Handbook on Falstaff). Having now heard this radiant soloists were nothing much. Having now heard this radiant soloists were nothing much. Having now heard this radiant soloists were nothing much. Gustav Meier, one of America's to lose it again. The composer most distinguished npera conductors, gave a polsed account tracted his finale unduly. Not the score.

This Roke coincided with the annual meeting of the American Musicological Society—at which two long sessions were devoted to Stravinsky—and was greeted account to Stravinsky—and was greeted with merited indignation and contempt. As another AMS with merited indignation and action by Altman—need not delain us long. Altman bad brought in his movie and Broadway collaborators to light and

The other passage is an improvement. Originally, Verdi ended the scene — the offstage voices calling, the Ford-Cajus dialogue overbeard by Quickly Andrew Porter reviews
two American campus
productions of unusual
interest.

dialogue overheard by Quickly
to a reprise in fragments of
Alice's mazurka fragments in 4/4 and apun his little
"masquerode" motif through
them, producing the magical
end we know — in his own
words "a better effect own The set, representing "the Bedlam of Hell." was a vast construction of scaffolding, ladders, ledges, and lofts peopled by a cast of 130 (the University Choir and University Dance Company combined). Here Nick Shadow was reigning prince, a huge cauldron ateamed tBaba was boiled in itt, and madmen reeled and writhed incessantly. Anne crisply companied recitals of two passages of Folloof. but in the Act 2 finale, I think, preserve his first thoughts.

May I without impropriety first "declare an interest" in the production — since it was

the production — since it was done in my translation, felicitously retouched by the producer, Judith Layng — and then record that it delighted me? To hear Folstoff in a small theatre (a 500-seater), in a sensitive straightfurward production, sung by an accomplished young cast, and conducted with great delicacy by Robert Baustian (formerly at Wiesbaden), afforded the keenest possible delight. One beard every detail of the score with a sharpness often lost in with a sharpness often lost in big-house presentations. Mark Moliterno, the Falstaff, and Katherine Harris, the Alice, graduating students, are two singers we should certainly be bearing more of.

combined subsidy for these 53 centres was FFr 115.7m. In



Fred Pearson and Gemma Jones

Clay/The Pit

Michael Coveney

After chronicling a farm labourers' uprising In 1830 in Captain Swing and the lives of women left bebind by the Second World Way in The Accringion Pols, Peter Whelan, one of the RSC's few genuine discoveries since the inauguration of a small house policy, has come up to

date.

in Hamburg. Bert and Micky have stayed close to their roots. Micky's Mum potters on and off from her bedroom; her son, Jimmy, is heset by apocalyptic nightmares. It is all a bit like Alan Ayckbourn down on Cold Comfort Farm.

The boy lurks while test pilots zoom dangerously close to the roof, He has buried his clay models out on the moor to protect them from the impend-The irony is that this strange and delicate new piece bas an old-fasbioned ring about it. Two couples, who grew up together as teenagers, are reunited in a Staffordsbire farm house after an 11 year gap. Pat and Win bave brought up their children to the roof. He has buried his splendidly to clay models out on the moor to protect them from the impend-ing catastrophe, At first Germa The writ ally town ally town an evening an 11 year gap. Pat and Win bave brought up their children to the roof. He has buried his splendidly to models out on the moor to oddly wing the moor to protect them from the impend-ing catastrophe, At first Germa The writ ally town an evening an 11 year gap. Pat and Win bave brought up their children to the roof. He has buried his splendidly wing the moor to oddly wing the moor to oddly wing the moor to protect them from the impend-ing catastrophe, At first Germa ally town ally town the moor to oddly wing the moor to oddly wing the moor to oddly wing the moor to protect them from the impend-ing catastrophe, At first Germa ally town the moor to protect them from the impend-ing catastrophe, At first Germa ally town the moor to protect them from the impend-ing catastrophe, At first Germa ally town the moor to protect them from the impend-ing catastrophe, At first Germa ally town the moor to protect them from the impend-ing catastrophe, At first Germa ally town the moor the moor to protect them from the impend-ing catastrophe, At first Germa ally town the moor to protect them from the impend-ing catastrophe, At first Germa ally town the moor to protect them from the impend-ing catastrophe, At first Germa all the moor to protect them from the impend-ing catastrophe, At first Germa all town the moor to protect them from the impend-ing catastrophe, At first Germa all the moor to protect them from the impend-ing catastrophe, At first Germa all the moor to protect them from the impend-ing catastrophe, at first Germa all the moor to protect them from the impend-ing catastrophe.

bursts open at this point. Miss Jones's carapace of small talk shot through with

mysterious longing.
This Is one of four excellent performances. The others, under Bill Alexander's meticulous direction, are by Janet Dole, Fred Pearson and Jira Broadbent. Sylvia Coleridge is splendidly funny and weird as the mother, John McAndrew oddly withdrawn at the hove oddly withdrawn as the boy. The writing lurehes occasionally towards the banal, but some fine sequences retain interest in an evening that would benefit, nonetheless, from a touch of

Hungarotones/Record Review

Dominic Gill

Bartok: Piano concertos Nos. 1 and 2. Bundapest SO/Lehel, Zoltan Kocsis, Hungarolon SLPX 11518.

Schubert: String quartets in B flat D112 and E flat D87. Takacs Quartet. Hungaroton SLPX 12390.

The French Ministry of Culture has just announced its 1983 arts budget. Last year's increase under the Socialists brought the level of subsidy from 0.47 to 0.75 per cent of total Government expenditure. Next year's increase will bring it to 0.78 per cent.

The overall figure for arts expenditure last year was FFr 5.944m (approx £530m), compared with FFr 2,987m in the previous year, and in 1983, Government assistance in the arts will reach FFr 6,989.9m, more than twice the expected level of British subsidy.

François Mitterrand's regime has also inaugurated a different emphasis in policy, recharging The: Hingaroton label of Hungary's slate record company is well enough known in this country—and hardly an unfamiliar aight in most large record shops. The technical quality of the discs compares favourably with the best of western pressings; the price (normally £4.99) is in the medium range. But the list is with only two hands, the whole The Hangaroton label of quanty of the discs compares favourably with the best of western pressings; the price (normally £4.99) is in the medium range. But the list is also larger and wider-raoging than many realise: production 1983 it will be FFr 152m.

Company funding is organlsed according to the status of
the artistic director. Peter
Brook's company at the Bouffes
du Nord received FFr2.3m in delays sometimes cause gaps in distribution; not all of the list is always exported; information can be difficult to come by (which means late reviews and

1981 and FFr3m in 1982. The Theatre du. Miroir of Daniel Mesguich (reviewed bere last week) received a smaller subsidy of FFr 400,000 in 1981 and FFr 600,000 in 1982.

Project funding varies from (which means late reviews and listings, or none at all).

A large number of new releases are nonetheless regularly available here and especially when they feature one or other of the remarkably talented younger generation of Hungarian ensembles and la communauté méditéraneene et la co-opération europeene."

It is no accident that the europeans feature at the end of the list, for "Latinité" has become a vogue word among arts administrators in Paris.

Current French arta policy lays considerable stress on "diffusion," taking Parisian products to the provinces, importing provincial work in the capital. The body responsible for encouraging and communauté méditéraneene and FFr 600,000 in 1982.

Project funding varies from year to year, and it is the fifth tier of funding, the writers bursaries and production grants, avoir to province and production grants on the basis of a text to order witbin four or five days from most record shops to order within four or five days from most record shops (Hungaroton's UK distributors, Parnote Distribution, can give

gressive Americanisation of the the capital. The body responstraditional Gallic way of life; ible for enconraging and administering this perpetual administering this perpetual administering this perpetual administering this perpetual what is most noticeable motion to SONDA (Organisation about the official attitudes to National Diffusion Artistique). The arts in France is a list president is Philippe Tiery, a committed internationalist accommitted internationalist are beginning to litter the Paris streets).

A further bugbear is the dwindling influence of French tour of Peter Brook's production and client is signally absent. further belp and information on 01-388 9906). Omniverous . transcriber for Omniverous transcriber for on Philips, and Perahia on one is forced, again and again to the keyboard that he was, Franz CBS. Rank'a performances are in the transcriber for a forced, again and again and again to the unaccustomed task of real contrapuntal listening. Their forays into Wagner's operas. He made greatest use of to say, of the highest sophished few months: but it will be Lohengrin, from which he tication) in shape and gesture,

Wagner: Piano transcriptions by Liszt and Kocsis. Zoltan Kocsis. Hungaroton SLPD 12494 (also on Pbilips 9500970).
Chopin: 24 prefudes. Dersö Ranki. Hungaroton SLPX 12316.
Bartok: Piano concertos Nos. 1 and 2. Bundapest SO/Lehel, Zoltan Kocsis. Hungaroton SLPX 11518.

Bartok: Piano concertos Nos. 1 and 2. Bundapest SO/Lehel, Zoltan Kocsis. Hungaroton SLPX 11518. arranged four excerpts in atl,

For bis Wagner-transcription recital Koesis chooses one of the four Lohengrin sections, Elsa'a bridal procession from the fourth scene of Act 2-elaborately re-conceived in keywith only two hands, the whole range of Wagner's orchestral with extraordinary pajette veracity. There is included als the Meistersinger prelude, and the Festive March from Porsifol -this last perhaps most effective of all, many-layered and darkly sonorous. The performances, and the digital recording, are both excellent:

to flod in the shops). Dezsö Ranki's new recording of the Chopin Preludes Itogether with the C sharp minor Prelude op.45 and the posthu-mously discovered A flat Prelude of 1834) is a most dis-ringuished addition to the list, and worthy of a place beside my own favourite versions of able—which are, in no particular order, by Pollini and Argerich on DG. Alicia de Lamare of evenly matched each asset as the control of the co rich on DG, Alicia de Larrocba on Philips, and Perahia on CBS. Rank's performances are unrommonly clear and unclui-

bighly recommended (the Philips version may be easler

and especially cuming in their pedalling. The simplicity is often deceptive; such perfect weighting of chords, for example, in the C minor largo Nn. 20, is just as difficult to achieve, and just as striking, as any prestissimo articulation. The recorded sound is warm without plumminess, clean and

clear.
Although it is more than 10 years old, and by now almost a collectors' item, I include the Hungaroton disc of the first and second Barrok plano concertos, made by Kocsis when he was still in his trens with the Budapest Symphony Orchestra under György Lehel, because it is still in the calalogue and should be more widely known. The recording quality carries its age well, and is no bar to appreciation of the performances, which are both of electoric acceptances. trifying presence: No. 2 ln par-ticular, driven with steel-tipped clarity and ferocious energy. Hungaroton's complete Bartok Edition has been by and large one of the finest quality. The performers of Hungaro-

ton's latest string quartet record are the Takacs Quartet I which started life as the Takacs-Nagy Quartet in 1975 while its mem-bers were still second-year students together at the Lisat Academy in Budapest) — who are probably the most talented of all the many remarkable en-sembles to bave emerged from Rungary in recent years. They give performances of two quariets from either end of Schubent's "first" quartet period from 1812-16 with wonderful conventration and intensity: it is refreshing especially (and rarer than it ought to be) to hear a string ensemble that is not a blend merely, but a live so evenly matched, each accent is so individual and distinct that

Tokyo Quartet/Elizabeth Hall

Max Loppert

personnel scems, however, to have effected not the slightest alteration of Identity upon the group, nor in any way disturbed what has long been reckoned its outstanding characteristic—the ability 10 interrupt the flow of play with an almost unblemushed immoculately polished lone, tand, in my experience, indeed, almost unparalleled! homogeneity of tone and ensemble. almost unparalleled homogeneity of fone and ensemble.
Tokyo Quartet performances sound at times as though one perfectly focussed instrument like a wax model of itself, not like a living breathing musical balanced parts; they bear witness to four minds, and four the contreplece of the

Since 1 last encountered it, music requires four independent the Tokyo Quartel has adapted voices, four distinctly character a new first violinist. Peter ful and colourful sources of Oundjian. The change of string timbre, lo waken to fullest personnel scenis, however, to have effected not the slightest Certainly, in the opening

witness to four minds, and four pairs of hands, trained to an extraordinary degree of executive concord.

On the simplest level of response, this affords musical making in terms of the physical enjoyment of quartet sonority is an uninterrupted pleasure. On the higher, level of interpretive insight, Tuesday's Tokyo concern was, as others in the organism.

In the centrepiece of the recital, the Berg Opus 3 Quartet, the impression changed radically. Far from being dulled by the unanimity of the playing. Berg's impassioned, rapturous, densely patterned musical imfolding was heightened by its purity. And it was private insight, Tuesday's Tokyo concern was, as others in the is an uninterrupted pleasure. On the higher level of interpretive insight. Tuesday's Tokyo concern was, as others in the past have been, an odd and unseitling experience. Mozart and Schubert quartets—Viennese Classical works (which surely, Death and the Moiden scan allowed essentially to be)—made up two-thirds of the programme; and it could be argued that, rather than four homogeneous strands, Classical end by its purity. And it was playing of quite magical purity: shafts of motivic working filtring with mercural lichtness across the ensemble, spectral colours and shadings drawn and sustained at every dynamic excellence of the performance was here not just technical: it idenufication of technique with musical substance.



New home for Ducking Out

York's Theatre tonight, after a

Warren Mitchell in Ducking farcical comedy by Eduardo de Out which opens at the Duke of Filippo which has been adapted by Mike Stott, with the action York's Theatre tonight, after a taking place in a Lancashire successful run at Greenwich. housing estate at Christmas The production was well rereived by Michael Coveney
writing on this page on November 10. Ducking Out is a day, Monday.

Saleroom

Antony Thorncroft

Seasons on one panel by David
Teniers the Younger sold for autograph revisions, sold for £9.50 at Sothebula in an Old £26,400 at Sotheby'a in an Old Maater sale which totalled £281,710 with 21.4 per cent bought in. A painting of birds by Jacob Bogdani made £20,900. In the English literature sale £7,700.

A set of four paintings of The the working prompt book of York dealer, and Edgar Wal-lace's original filmscript of King Kong realised £8.580. The and Leonard Woolf fetched

Arts Guide

Music/Monday. Opera and Ballet/Tuesday. Theatre/Wednesday. Exhibitions/Thursday. A selective guide to all the Arts appears each Friday.

Exhibitions WEST GERMANY Frankfurt, Stadusches Kunstinstitut

emphasis in policy, recharging a favourable climate for artistic

raux. In 1959, Malraux stated North African. The shift away that the goal of an arts policy from American, and some was to allow maximum access Anglo-Saxon influence is further

to the great works, "oeuvres clarified by the department's capitales," of France and the statement of aims. "Ce

world, and to provide a suitable développement des échanges climate for the creation of new avec les cultures étrangères, des

seeking to contribute . . . "au peans feature at the end of the rayonnement de la Culture et list, for "Latinité" has become

rayonnement de la Culture et list, for "Latinité" has become del Arte français dans le libre a vogue word among arts ad-

This is not empty rhetoric, lays considerable stress on the statement of a distinct "diffusion," taking Parising

Mondial at the Theatre de et la co-opération eu Nancy, adds a new dimension, It ls no accident that

83 Scheumankai: Harvard Universi ty has loaned its collection of German reconeth century art from its Busch Reisinger Museum, chiefly works from the 1920s and 30s. Ends

Berlio, Martin-Gropius-Bau, 110 Stresemaonstralle: International irends in contemporary art are repre-sented through about 50 artists. Their 250 paintings, sculptures and environments highlight the feeling. the consciousness and subconscio tendencies at the beginning of the

1960s. Ends Jan 16. Cologne, Kunstverein: Josef Haubrich Hof: Sculpture, pictures, environ-ments and photographs by 16 young

prizewinners at recent contests staged by private sponsors of the arts. Ends Jan 9. Stuttgart, Staatsgalerie, Konrad Adenauer Strusse: Late 16th and early 17th century Italian masterpieces

reflect the beginnings of Baroque. Ends spring 1983. Hamburg, Kunstverein, 1 Glocken-giesserwall: More than 200 works by 13 contemporary East German artists offer a comprehensive survey of today's artistic scene in the other

Germany Ends Jan 9 Dulsburg, Lehmbruck Museum . 5!2 Dusseldorfer Strasse: In response to the German Lehmbruck show in Moscow, the Dusburg Museum is exhibiting roughly 400 works by Alexander Rodzenkow and Farvara Stepanova, the Russian constructivists. It is the first comprehensive retrospective by the two who are among the most important artistic figures of the 1920s and 1930s. Most of the paiotings are on loan from So-viet Museums and the Moscow collection of the Rodzenkov family.

Munich, Haus der Kunst, t Prinzregentenstrasse: Oil paintings and drawings from between 1912 and 1936 by Giorgio de Chirico, the Ital-ian artist. Ends Jan 30. Baden-Baden, Kunsthalle: Yves Tanguy. The American French surrealist painter's first show lo Europe

contains 140 paintings and drawings. Ends Jan 6. **NEW YORK**

Metropolitan Museum of Art: The Search For Alexander arrives at its final destination before being re-turned to Greece with its display of 180 works of Greek art from the 4th to the 2nd centuries B.C. Ends Jan 3.

Guggenbeim Museum: Selections Irom Peggy Guggecheim's Veoice collection will be displayed for the first time in New York, including works by Brague, Chagall, de Chiri-co. Picasso, Moodrian and Du-champ. Ends March 13. A retrospective of Yves Klein tocludes 100 pain-tings and sculptures and personal letters and photos. Ends Jan 9.

(860 1300) loternational Center of Photography: 140 photographs by Jacques-Henry. Lartigue illustrate life in Paris dur-ing the Belle Epoque, 1902-1939. Ends Jan 9. (860 1777)

Pierpoint Morgan Library: French Painting in Manuscripts, 1420-1530, will trace the historical development of manuscript illumination with examples from the library's collection as well as from other American col-lections. Ends Jan 30. Autographed

neutons. Land Jan 30. Autographed music manuscripts and letters from Franz Joseph Haydo and Igor Stra-vinsky are also on display. Ends Jan 30, (585 0610) WASHINGTON Hirshhorn Museum: Sculpture, paint-ings, and drawings by Devid Smith make up the most comprehensive

Jan 2. (3572700).

survey of his prolific work. Ends

CHICAGO Museum of Contemporary Art: The first American retrospective of Pol-ish sculptress Magdalena Abakano-wice features her fibre installations.

Ends Jan 2. (280 2680). LONDON

National Portrait Gallery: The Imperi-al Tobacco Portrait Award is one of the most imaginative examples of sponsorship of the visual arts in recent years. The prize is £6,000, with a lurther £1,000 for a commissioned portrait from the winner, for a recent portrait by any painter under 40. This year the winner is Humph-rey Ocean. a sometime defector to pop music, specifically to lan Dury and the Blockheads, but always an Milan, Galleria Elle, via della Spiga 2: artist. His winning painting, and those of another 51 finalists make

uo the exhibinon. Ends Jan 23.

Kunsthlatorisches Museum: Stones of

the Pharoes. An exhibition of works of art starting from pre-bistoric days, using a wide variety of materials from precious and semi-precious stones to various types of stone. Geologists have brought together 1900 varieties of stone from 400 qua-ries in Egypt to identify the source of materials used as long as 2500 years ago. Samples of rock are disyears ago. Samples of rock are dis-played alongside the statue or simi-lar work of art. Ends Jan 23. Künstlerhaus: 'Gods, Spirits and Of-ferings' – works of art from the Lindenmuseum in Stattgart. Historisches Museum: Oskar Kokoschka: the early years Ends Jan

Rome, Campodiglio: Art Treasures from the Kremlio, Ends Jan 1. Home, Campidoglio: An exhibition of 12 paintings and six drawings by Andy Warhol inspired by de Chirico.

Jean-Baptiste Oudry (1686-1755). The Grand Palais is presenting a retrospective of an artist too long consideration.

Ends Jan 31. Rome, Museo del Risorgimento, Piazza Venezia: Garibaldi: Art and history. Ends Dec 31.

ry, Ends Dec 31.
Milan, Museo di Milano, Via Sant Andrea 8: Jewellery and an ivory doll lound in 1889 in the tomb of a Roman girl who lived in the scould century A.D. The 23cm high doll is the world's oldest doll. Ends Dec 31. Milan, Castello Siorzesco: Engravings from the Leonardo and Bramante

Romantic Italy as seen in 19th cen-tury English water-colours. Ends

Venice, Patazzo Fortuny: Dolls, toys and automatons with about items from 1830 to 1930.

December 10-16

Florence, Palazzo Vecchio: Method and techniques of restauration in-cluding the restored Primavera by Botticelli. Ends Jan 6. Florence, Utilizi Gallery: Renaissand

drawings from Perugino to Raffael-lo; 20th Century Self Portraits. Both end Dec 31. BRUSSELS

Societe Generale de Banque: Blue

prints, drawings, photographs and maquettes illustrating how succes-sive planners modernised, expanded and ruined the city. PARIS

ered only as painter of royal hunt-ing scenes and portraitist of the king's dogs. It shows the surprising variety of his landscapes, the mas tery of his drawings and the origin nality of his designs for Gobelin tapestries. Grand Palais. Ends Jan 3. closed Tue (26t 5410).

From Carthage to Kalrouan, 2000 years of art and history in Tunis. Magnificent mossics and a vast model of the Kairouan Mosque retrace the succeeding Phoenician Roman and Islamic influences on art in Tunisia, Petit Palais, Closed Moo. Ends Feb 27.

F.T. CROSSWORD PUZZLE No. 5,052

ACROSS 1 Pub has sailor coming back causing trouble (6) 4 Girl meets group at the

10 Declaimed building 1'd erect 11 Give cases of refuse (7)

12 According to Chesterton, where to dine (4) 13 Having a direct object passing over (10)

15 A place to meet such as Shaftesbury (6) 16 Corsican say I leave and defame (7)

20 Fleet Street worker may im-press the Queen 171 21 Flier seen in summer linestorm (6) 24 Royalty at shopping centre

in Devon (10) 26 Bet mount returns (4) 28 Woman doctor goes to ancient City to charm (7)

29 Emporiums accept I make up yarns (7) 30 Think rest upset judge (8) 31 A race finish to be present

at (6) DOWN 1 Witty remark I am able to

follow at Tube station (8t 2 He is never short of 29 (9) 3 Have a voice in local Tory party (4) 5 Ring lady perhaps at college

6 One licensed to sell lost material (101 7 Excuse a beginner having one double (5)

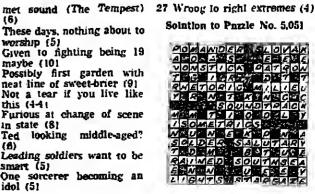
- than did ever plum-

9 These days, nothing about to worship (5) 14 Given to fighting being 19 maybe (101

17 Possibly first garden with neat line of sweet-brier (9) 18 Not a tear if you live like this (4-41

19 Furious at change of scene in state (8) Ted looking middle-aged? 22 23 Leading soldiers want to be

smart (5) 25 One sorcerer becoming an idol (5)



HORE WORK all Group

FINANCIAL TIMES

Telegrams: Finantimo, London PS4. Telex: 8954871 Telephone: 01-248 8000

Thursday December 16 1982

Competition in air transport

air transport throughout Wes- tlon. all transport throughout Western Europe, and especially for some reductions in air farss. It has been an uphilt atruggle, in the face of entrenched reluctance from many West European governments, soth inside and outside the EEC, to accept either the small diminution of their air transport sovereignty. their air transport sovereignty that such a liberalisation would involve, or even token reduc-tions in air fares.

The list of British moves in by British Airways to get the two-class Club/Tourist concept

There have been studies and reports gatore on the need for liberalisation and cheaper fores, but only a little progress bas been made. Some independent airlines have won rights to European destinations, against fierce Continental objections. But there are as yet no Shuttles to the Continent, and the principle of cheap scheduled aeats on holiday charter fights is not on holiday charter flights is not in many cases the overall size yet accepted on the other side of the market has been

of the Channel.

Even efforts by the European
Commission to bring Europeans
air transport under the aegis of the Treaty of Rome, so that the rules governing competition can be implemented, bave been vigorously resisted by govern-ments which fear the end of their right lo total control over their airspace and what can fly

It is against this background that Mr Iain Sproat, the British Minister responsible for civil aviation, meets in Brussels today with other EEC transport tion of the air transport rules in Europe. His immediate desire is modest—lo get greater free-dom for the smaller UK airlines services between the UK and the Cootinent and for others to fly similarly between Continen- practice.

FOR SEVERAL years past, the British Government bas been he will be pushing for wider in the vanguard of the drive for a grealer liberalisation of meed for progressive liberalisation.

EARLY 500,000 people are expected to take to the

today to demonstrate against Argentine's ruling military

It is likety to be the country's biggest public protest in a decade and will present a stark contrast with the crowds who thronged the streets of the capital and the streets of the capital with the capital will be street with the capital will be street with the capital will be street.

tal last April and May to sup-port the Government's ill-fated invision of the Falkland

Six months after the Falk-

lands defeat, the Government of President Renaldo Bignone is facing such strong popular opposition that it is a small miracle that it is stilt on its

Humor, summed up the situa-tion succinctly this week with

a cartoon showing the junta members shrouded in bandages

from head to toe and barely able to support each other.

has to resolve three extremely delicate and inter - related issues: a return to civilian rule, a resolution of its international

debt problem and the revival of

the economy.

The military, which seized

power from the Government of President Estela "Isabelita" Peron in 1976, amid chronic economy difficulties and bitter

fighting between left and right wing guerrilla organisations, bas pledged to restore civilian

President Bignone recently announced that he was bringing forward the projected date for presidential elections to the last

quarter of 1983, but many local commentators believe that the junta could bow out before July and that President Blgnone

himself could bave gone well before then. However, few Argentines are prepared to guess tha manner—or the coo-sequences—of their going.

Opposition to the Government in the past few weeks has

ranged from middle-class house-wives, banging empty pots, to a large group of Faiklands war veterans who called senior generals "sons of bitches" and

staged an unprecedented sit-in during a ceremony to honour

the fallen.

The country has witnessed a bloody riot in the working-class suburbs of Buenos Aires because of increases in municipal taxes and faced virtual paralysis

Yet it is against this unpromising backdrop that Argentina

streets of Buenos Aires

Clearly, he will not bring down the basilons of European air transport overnight, but ba may well be able to achieve something. What Mr Sproat is seeking is an evolutionary, rather than a revolutionary, approach, with a progressive relaxation of rules

It has to be accepted that in Western Europe there are marked differences of comthis field includes the long battle petitive ability between countries, and that the degree of liberalisation acceptable to governments is not the same on all routes. In the UK of air travel widely accepted and its efforts to introduce Shuttle flights to Continental cities, British Caledonian's "mini-prix" fares to a wide range of European destinations, and the bld to win European acceptance for the principle of offering a few scheduled passenger seats on holiday charter flights to destinations not directly served by scheduled services from the UK.

There have been studies and liberallsation acceptable to governments is not the same on all routes. In the UK British Airways is often a vigorous opponent of attempts by independent airlines to win a better sbare of routes that for long have been the exclusive preserve of the state-lowned flag airline, the Government's decision to allow British Airways is often a vigorous opponent of attempts by independent airlines to win a better sbare of routes. In the UK arisonates of the same on all routes. In the UK arisonates of the same on all routes. In the UK arisonates of the same on all routes. In the UK arisonates of the same on all routes. In the UK arisonates of the same on all routes. In the UK arisonates of the same on all routes. In the UK arisonates of the state of the state lowned flag airline, the Government's decision to allow British Airways is often a vigorous opponent of attempts by independent airlines to win a better share of routes. In the UK arisonates of the UK arison

Benefits

side the state airline, both at home and internationally, they are showing that they can make money, and that the consumer genuinely benefits from cheaper fares and a wider choice, while

state-owned alrlines, is too low.

White there are all sorts of technical reasons why full-scale deregulation on the American pattern is not feasible, at least the

Loans for small business

IMPORTANT decisions must be taken in the next few weeks on the future of the Loan Guarantee Scheme, one of the British Government's most radical measures yet to assist small

allocate more money — either on the present "pilot" basis or on a more permanent footing—when the £300m currently set early next year. It is right to extend the scheme, not only because its popularity has exceeded expectanons but expectations because there is now enough evidence to suggest that it fills an important gap. At the same time, some of the conditions should be changed to give tax-payers better value for money.

Sound plans

The scheme was launched just over 18 months ago and is similar in many respects to initiatives in other industrialised countries such as the U.S., Holland and Japan. The idea has been to encourage banks to lend more money to small firms which bave a sound business plan but which for some reason cannot meet the traditional requirements to gain support. The lack of adequate personal security or the absence of an appropriate track record have been known to frustrate many a promising venture.

Under the scheme the Government guarantees 80 per cent of the amount borrowed up to a maximum of £75,000 — in return for a 3 per cent premium on the guaranteed portion.

With the 30 or so participating institutions—which include the big four banks and the Industrial and Commercial Finance Corporation — only carrying 20 per cent of the risk. the hope was that they would prove more adventurous in backing small businesses.

results of what has happened so far, however, is the way aid schemes this one has much many of these hankers have to commend it. It does, of enthusiastically taken up the course, run the risk of encourchallenge. Rather than treating aging small companies to loan applications as simple increase their borrowings to an credit assessments—"where is excessive level, when new the security if things go equity finance might be more wrong?"—branch managers have appropriate. In this context the had to put more emphasis on Government needs to compleanalysing projected cash flows olner forecasting tools. They have had to broaden their of bow a greater use of the concept of risk and this has Business Start-up Scheme could peen salutory.

Demand for the scheme bas been far greater than antici pated. An Interim assessment of the scheme by the Department of Industry suggests that between 60 and 80 per cent of the 7,000 companies receiving Ministers now look certain to the loans would not have got the money otherwise.
About balf the 7,000 were

About balf the 7,000 were businesses, about half are manufacturers and all of them are creating jobs—though the DoI is reluctant to estimate just how many. National Westminster reckons that new businesses which it has backed under the scheme are employing over 6,000 people.
In spite of these successes, the

scheme and the way it has been operated have inevitably attracted criticism. It is apparent, for example, that the money is not always being used in the way which was originally intended. The Government recently commissioned an outside firm of accountants to sole firm of accountants to examine the first 50 businesses which falled after receiving losus and it was clear from the conclusions that some of the individuals involved had shown little personal commitment to their projects. A key feature of the scheme is, of course, that personal assets need not be pledged as security; but it is surely wrong that people with substantial personal resources should not be required at least to put some

Commendable

The biggest official worry is the level of failures. Initially it was hoped that income from premiums would be sufficient to cover claims paid out on loans which went wrong. The latest figures—which admittedly are distorted by the timing of payments-show that there is now no chance of the scheme

financing itself this year. Subsidies may be unpalatable One of the more encouraging to the present government, but compared with many industrial ment the review of Loan Guarantee Scheme with a study

Where UK independents are allowed to fly on routes atong

At their recent summit meeting in Copenhagen leaders of EEC governments agreed on measures to open up the internal market and to remove unnecessary barriers to competition. The airline business is an excellent example of how national protectionism works against the interests of the consumer. Costs are too high; productivity, especially among

ministers to make further in the immediata future, there efforts to win some liberalisa. is everything to be said for in the immediata future, there is everything to be said for breaking down some of the barriers and creating tha scope for new sources of comercial and moral disintegration and moderate politicians have been declaring publicly that ministers is an opportunity for mutting the sentiments. putting the sentiments expressed at Copenhagen into sentiments

of civil war. Today's rally was originally called by the five main opposi-tion parties in the Multiparti-daria to press for an early and democratic transfer of power. It bas since gathered support om buman rights activists, miltant trade unionists, students,

ARGENTINE'S JUNTA

A struggle to stay afloat

By Jimmy Burns in Buenos Aires



Women whose children disappeared after the 1976 comp raise a protest hanner in Buenos Aires.

THE SHAPE OF THE DEBT PROBLEM

ARGENTINA'S \$39bn of foreign debt may seem small when compared to the \$160bn debt mountain of Mexico and Brazil, but it has been just as worrisome in recent months.

The impact of falling export prices, rising interest rates, an annual inflation rate

rates, an annual mination rate which has been estimated at up to 300 per cent, the cost of the Falklands war and a sizeable public sector deficit have left Argentina, in the words of one banker involved in the matter, "without any arch."

eash."
Help is on the way,
however. Argentina last
month signed a letter of
intent with the IMF for a
\$2bn package wbich would
run for 15 months, Of this
amount \$500m would be
supplied at first as a compensatory financing facility to
help Ruenos Alres with its help Bnenos Aires with its shortfall in export earnings.

to aid the country's balance of payments.

Banks have been put under heavy pressure by the IMF to help shore np Argentina and commitments were originally expected to be provided by yesterday. But Buenos Alres has delayed supplying crucial information on international bank exposure and the 10-member bank advisory committee has been unable to tell creditor banks what formula they should use in calculating the new loans. The new deadline is tomorrow, but few bankers expect it to be met.

M Jacques de Larosiere,

because of: Economic mismanagement:
 Most Argentines have suffered a dramatic cut in living standards since the 1976 coup. Human rights violations:
 Many Argentines are now waking up to the scale of the repression that followed the coup, which has been kept from domestic attention because of this coup. stringent censorship.

 Military incompetence: For many civilians, the Govern-ment's continuing claims to the Falkland Islands have become

But the less crucial than the resolution of domestic political and eco-nomic problems.

One faint glimmer of light on

conscientious objectors, artists the economic front bas been lost and football supporters — in the general political dold-fact anyone with the slightest rums: under the umbrella of a grievance against continuing letter of intent for a \$2bn IMF government by the armed credit package, Argentina is forces. And after six years of likely to obtain \$2.6bn of addi-

military rule the list is endless, tional fuding from commercial because of:

The IMF money is condi-tional on the co-operation of

Argentina's 325 commercial bank creditors in providing a further \$2.6bn of loans. This total includes \$1.1bn bridging

loan from January 1983 until March 1984 and a five-year term loan of \$1.5bn to be used to aid the country's balance of

All this constitutes valuable. breathing space while the country seeks a longer-term solution to its \$39bn international debt problem. There could, however, be a

political price to pay. Domestic opposition to the fact that the Government is handling the debt issue by negotiation rather than has been less vociferous than at

But the potential for controversy should not be under-estimated: abundant natural resources have given the Argen-tines an inflated sense of their ability to survive without help from foreign banks.

Full details of the IMF "letter of intent" bave yet to become public. But It is already

mean economic austerity, which companies.
will be hard to sell to the man Unlike Lin the street big borrow

managing director of the IMF, told bankers in a recent

telex that he needed firm assurances by late December in order to go to the IMF's executive board on January

Another element of the Argentine rescue package is the rescheduling of between \$5.50n and \$8bn of short-term debt which falls due in 1983. The plan is to secure hank agreement to refinance this debt with a new maturity of 1990. Bankers expect to get to work on this in January. In addition to these measures, Argentina has asked the Bank for International Settlements for a \$750m credit, but this has not yet been announced in Basie.

yet been announced in Başle.

What are Argentina's debt, prospects next year? Bankers, say it is difficult to look beyond the immediate problems. If all goes well, the

in the street

When it took power, the
military pledged itself to restoring economic order and ending
financial corruption. Six years
later what was initially called
the "process of national reorganisation" has been renamed by cynics the "process of national disintegration." GDP bas fallen by I per cent

over the past six years (com-pared to an annual average rise of 4.5 per cent between 1964 and 1974) while inflation is running at an annual rate of 300 per

Free market policies intro-duced by the military — including high interest rates and a lowering of tariff barriers -are widely regarded as important factors in a wave of bankbridging loan will be repaid with IMF funds. New money will also be recycled to banks in order to make up 1982 arrears which total more than S2bn rescheduling of

commercial bank

Aregentine debt is a possi-bility, but bankers point out that the economy is a resilient one. If export prices pick up and the public sector deficit is reduced from its level of 14 per cent of GDP this year to 8 per cent in 1983, the country.

8 per cent in 1983, the country could "bounce back."
One London banker summed up the situation this way: "They have a great natural strength which they abuse all the time. They have the laxury of plentiful natural resources and absurd political chaes. Cross your political chaos. Cross your fingers."

Alan Friedman

ruptcies among local industrial

Under the IMF letter of thousands of people who disapintent the Government is now peared following the 1976 coup. aiming for 5 per cent growth in 1983 and a reduction of

by lowering interest rates, and bailing out heavily indebted companies with refinancing schemes. However, the main emphasis of its economic

recovery plan is being placed

agricultural sector,

which is responsible for over 70 per cent of Argentina's total

The LMF's request for a reduc-tion in the budget deficit from about 12 per cent of GDP to below 8 per cent is expected to mean the trimming back of an ambitious \$1.9bm two-year public works programme which includes large railway and ity droselectricity construction

By reducing the budget defi-cit and banking on a healthy agriculturally-led trade surplus of \$3.5bn, compared to \$2.5bn of \$3.5hn, compared to \$2.5hn this year, the authorities hope that they can avoid adding to their foreign debt next year, But there are doubts whether the aims can be met; Even if there is an upturn in world economic activity—with its consequent boost for Arcentine commodity price—the Government's ability to maintain a coherent, economic policy and responsible debt management could be under mined by the country's increasingly agulated country's increasingly agalated politics.

Thus, while the Government will want to keep a tight control on wage increases, it is takely to face strong opposition from labour.

Anti-militarism is now wide.

spread in Argentina society. But the scope and scale of the en-rent political crisis could argu-ably be blamed as much on the inability of the civilian politi-cians to come up with a credible alternative as on military incompetence.

The reluctance of sectors of the armed forces to return to barracks is partly explained by fears that a lack of political ideas among the established parties—at a time of great social tension—could lead to renewed guerrilla activity.

The Multipartidaria, which has organised today's demonstra tion, was formed two years ago as a brave attempt to paper over the rivalries that have traditionally divided Argentina's political parties, and to secure a full commitment from the armed forces for a return to civifum rule. It includes the nationalist Peronists and the middle-of-the-road Radicals, who together secured over 70 per cent of the total vote in the last presidential elections held in

1973.
Last December, the Multi-partidaria issued what is des-cribed as an alternative economic programme, but all the parties plans are strikingly big borrowers — Mexico and
Brazil — Argentina therefore
has little growth to show for its
debt mountain. A substantial
proportion of the borrowings is
believed to have been spent by
the Government on arms

companies.

Crives

Another factor behind the reluctance of some officers to
speed up the transfer of power
may be the increasing demands
from the civilian opposition for
an investigation into the fate of Behind the scenes, therefore, the mililary remains deeply inflation to 160 per cent.

Since the beginning of this year, it has attempted to offer a lifeline to domestic industry by lowering interest rates, and sions as candidates jockey for power.

> Dissatisfaction with the mili-tary may unite them in today's march, but the political outlook thereafter is anybody's guess.

Men & Matters

Knoll's lot

Stephen Swid and Marsball Cogan are noted collectors of American art, sponsors of museum shows, and belp run public museum and art-support organisations. But they had bought little at Sotheby's before they splashed out \$12.8m on a 14.2 per cent share of the auction house itself. Former Wall Street analyst 42-year-old Swid, who is on the

advisory board of the Guggen-heim Museum, bad bought only thre works at Sotheby'a in New York.

He compares the auctioneers, however, with his furniture design company Knoll Inter-national as "unique for their reputation and quality." There are, he says, "thousands of auctioneers, just as there are thousands of furniture manufacturers, but Sotheby's and Knoll are known throughout the world." Swid and Cogan met on Wall

Street 20 years ago and became partners 10 years later. Though their first investment in the furniture field, in carpet cushion manufacturer General Felt Industries, had nothing to do with art, they saw Knoll as an amalgam of their investing and artistic bents.

Both men are avid collectors of American art. Cogan, the elder at 45, also indulges in gre-Columbian art. Through Knoll, they have supported exhibitions at the Guggenheim and the Museum of Modern Art, as well as ? film about architect Mies van der Robe made by bis daughter Georgia. Mimi Poser of the Guggen-

have "spiril, youth, dynamism, great intelligence and energy.
If anybody can do a good job,"
she says, "they can."
Though Sotheby's reacted coolly to news of the share purchase, Swid was already preparing yesterday to play the English gentleman." Our representative in London contacted

heim considers the two men to

said. "But we feel they have been mild in their comments." While a number of American corporations, including Warner and American Express, have ex-pressed an interest in buying Sotheby's, the Swid-Cogan team intends to hold on to its shares and participate in the firm to the extent to which it is invited to do so.

Dry docked

Money-or rather the lack of it —was the basic theme of an unveiling in Liverpool yesterday of an impressive plan for a 32-acre sports, leisure and abopping complex aimed at resusci-tating derelict dockland. The development would cost £37m plus £7.5m in government grants to reclaim the docks. But the Merseyside Development

Corporation, appointed to re-vive the area, is not going to spend a penny of tax-payers' money untess the man bebind the idea, Peter Wynne-James of Pavilion Recreation. Malvern. Worcestershire, can show that the private sector is going to Noble estate put up the rest of the money. Wynne-James bas been asked for proof of financial support by

the end of this month. He believes that Roualeyn Cummings-Bruce of Jones Lang Wootton. the estate agents, and an unnamed merchant bank will put together a financial package early in the New Year with 47 per cent couity finance and the remainder from loans. Will that be enough for the

development corporation which will discuss the Wynne-James proposal today? Chief executive Basil Bean sat with the press when the architect's model was shown yesterdey. He tells my man: "I'm trying to find out what's going on too."

docks would then have a mari-

international garden festival at

now claiming for sets silk stockings against Income Tax."

middle. Is that the sort of regeneration the development cor-

Sir Frank Taylor's paternalistic approach to running one of Britain's largest building and civil engineering groups, with star prizes and seaside holidays for In a gesture towards the Christthe most enterprising employees, has amused some of his compelitors over the years.

But his stewardship of Taylor Woodrow bas never been in doubt. And, together with an evangelistic dedleation to the causes of freedom and free enterprise, it has brought him bis own star prize at the age of

His life peerage, announced yesterday, is as much a reflection of his commitment to capitalism-" there ie no alter-If the project does materia native except a form of com-like will it really help Mersey munist fascist slavery." he has did not blink at the price—it side? The redundant south said—as it is a recognition of was only a small part of the his contribution to the construct £6.000 he spent there on his time museum at one end, an tion industry.

When he was a lad of 16 years them only last night and we the other end end the sporta he borrowed £470, built two beve not heard back yet," he and leisure complex in the semi-deleched houses in Black-

pool, and sold them for £2,000 Sixty years on, Taylor Wood-row bas strayed a long way from Blackpool in its search for work and now has an annual turnover

and now has an annual turnover of around £600m.

Taylor's appointment as life president of the group in 1979 did not represent the normal prelude to retirement. He is still passionately involved in the affairs of the group

There is no doubt that
Taylor's popularity in Downing

Street was enhanced earlier this year when be pulled Taylor Woodrow out of the Confederation of British Industry.

That act seemed, on the surface to be because of the CBI's

aggressive stance towards the government's economic policy at that time. In reality be is thought to have acted as he did because of the employers' body's growing affinity—as he saw it—with the nationalised industries.

A prime mover behind the

construction industry's anti-nationalisation campaign, Taylor helped punch holes in Labour's plans for state control of the largest groups.

Spillage.

mas spirit William Grant and Sons, the whisky firm, has this year imported eight decanters of vintage Sempe Armagnac to be sold at £235 apiece retail. I've been trying to follow the fortunes of this top people's

tipple.
Two decanters disappeared somewhere in transit. Four have arrived at Harrods, Fortnum and Mason has one, and the last one is being kept by

Grant Harrods has already sold one Christmas shopping.

Observer

The December issue Includes: ARAB BANKING AND FINANCE-ANNUAL REVIEW * Arab banks expand obroad.

* SAMA rules over a profitable banking market. * Bohrain's new offshore bonks. * Kuwait avercomes the Manakh shock. Controversy in the UAE.

* Growth in the Maghreb. * Arab banks look eastwards. * Table of Top 100 banks.

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What really makes Opec run

By Anthony Harris

THIS IS the time of year when thoughts turn to the Christmas break and the possible collapse of the Opec cartel. There was a time when these were both cheerful thoughts; but nowadays, with much bank credit secured on expected oil revenues, and Britain a quasimember of Opec—a free-loader. member of Opec—a free-loader in trade union terms—a collapse of the cartel looks more like a threat than a promiae. An analysis, then, which suggests that the collapse is about as unlikely as it has ever been ought to cheer you up. This article, whose conclusions are hostage to a meeting only three days away, is a possibly foolbardy contribution to the Christmas spirit.

Certainly there is room for some alternative to the "all cartels collapse in the end" school of commentary, led by no less than Professor Milton Friedman, which seems prepared to pick itself up and try again no matter how often it falls flat on its face, with a faith worthy of the millenialists. The belief that offenders against free market theory will reap their of the cartel looks more like

ket theory will reap their punishment in the end is really more a matter of religious faith than economics and its upbolders, like other zealots, are prepared to ignore awkward facts—such as the fact that if diamonds last forever, as does the diamond cartel.

To be fair, the collapse theory has not been properly tested yet, because Opec only

tested yet, because Opec only became a cartel in the classic became a cartel in the classic sense — an organisation to maintain a monopoly price by restricting production—in the last year. Up to then it was simply a rather loosely-organised and often undisciplined price ring.

Indeed, the whole difficulty in thinking clearly about oil prices is that the subject is clustered

is that the subject is clustered up with myths—not only the myth that Opec is a cartel, but the myth that it is an Arab conspiracy, launched in 1973, to over-ride the working of the free

The fact is that there never was a free market in oil; that the price rose because the bargasoing balance between oil producing countries and oil processing companies bad shifted decisively as early as 1971; and that the causes were economic. What is more, Open pricing policy has been quite sophisticated economically since



1973, and it seems a reasonable working assumption that it will remain 20.

emain 20. First, the history. The point of debate for future historians will be not so much why the price ruse so steeply in the 1970s, but why the oil companies had been able for so long to buy crude oil at a fraction of the cost of any alternative source of alternative source of energy. . The superficial answer was that the market was run by a

brying ring—an example of what Marxists would call neocolonialist exploitation, and what British economists, with their love of Greek words, might be compelled to christen an olimprony. an oligopsony.

However, there is happily no need to go into the economics

of such an ungainly word, because the true emplanation lies a little deeper, in the state of expectations about future oil supply. For a long time in the 1950s and early 1950s, oil exploration was sensationally successful; it seemed only necessary to drill a hole in any suitably study and mainhabited. place, and uninhabited place, and up it came. The rulers of such places competed for the favours of the Seven Sisters of the world oil industry. Nemesis, to bring in a simpler Greek concept, was lurking, as usual. As the Seven Sisters exploited their buying power to drive other fuels off the market, they began to



Players in Opec's history: Col Gadaffi of Libya (left), the late Shah of Iran and Sheikh Yamanl of Sandi Arabia.

years' consumption, began to turned his attention to silver as if Opec was there even if it sink in good earnest. Of course, when he ran out of such was not (as Britain behaves as known stocks of any commodity eccentric patrons) suddenly if it were a member, though it always look rather limited, for demanded a 40 per cent increase is not). The parallel of o collariter a certain amount is discovered, it ceases to be worth coude, and got it. The ring was looking; and it is when surveyers are searchine and fails the rest was a matter of time.

Secondly, by setting a price looking; and it is when surveyors are searching and fail-ing to find new supplies that the squeeze is on.

By 1970 the Club of Rome, generalising naively from the true example of chesp oil, began generalising naively from the of Opec were perfectly rational true example of cheap oil, began and explicit. Early on, the Shab to proclaim the imminent exhaustion of just about everything. As soon as attention was oil, encourage substitution, and

the rest was a matter of time. The October War of 1973 ensured that the time was short.

The basic economic objectives

Opec's self-interest might suggest a slight price adjustment

drawn to the facts, the balance of power was bound to change. Oil countries, perceiving themselves as possessors of a limited stock of wealth rather than a God-given source of meome, would become reluctant to part with it at cut prices. The Seven Sisters would become increasingly concerned about security of access to what easy oil was left. drawn to the facts, the balance

The first fissure appeared not in 1973, but in 1971. Colonel the market they began to Gadaff after ejecting BP in a bore more dry boles; demand fit of anti-cotonial page, and went on growing rapidly and casually making a billionaire of known reserves, in terms of Nelsen Bunker Hunt (who

so prolong the income flow (Iran was particularly aware of the was particularly aware of the limitation of its reserves). Later Sheikh Yamani stated a second objective; to maintain the price of nil just below the level which would make it worthwhile to invest in really radical substitution.

. These two statements add up to an entirely sensible stralegy, and the strategy bas two very interesting implications.

First, the price strategy is obviously in the long-term interests of every owner of oil reserves; oil producing reserves; oil producing countries would tend to behave

Secondly, by aetting a price objective, the producers im-plicitly declared themselves completely passive about the quantity sold in any one year: they were price-makers and therefore demand-takers. This was an easily manageable strategy for two reasons. First, some of-the major producers were, and are, oil-rich beyond the dreams of avarice; they do not spend their revenues, and can cut production with little

It was also easy, however, for countries with more pressing spending needs to take a philo-sophical attitude to fluctuations sophical atitude to fluctuations in demand: if they couldn't sell as much oil as they might wish in any one year, they could borrow against it. The growth of oil-secured debt was therefore a natural part of the working of a producer-dominated, price-setting oil market.

Once the central banks of the world bad decided to con-nive at "re-cycling," with all its implicit banking risks, rather than insist that long term lend-ing must be matched by genuine long-term borrowing, it was in-evitable that the fate of the banking system would become increasingly embroised with that of the oil producers.

Re-cycling by the banks proved a potent source of potenial monetary inflation, as might be expected; and it was after 1979, when the central banks, led by the U.S. Federal Reserve, decided to suppress the symp-toms of this disorder through a squeeze, that difficulties appeared. Very high real interest rates discourage borrowing by producers and potential producers, and led to price-shaving and some disorder with-

in Opec itself. This is where we are now, This is where we are now, awaiting the Opec meeting this weekend in an unusual mood; the financial markets now regard the possibility of a major break in the price as potentially the biggest oil shock of all. Are we really about to suffer a fare which might have been devised by a Great transfer. by a Greek tragedian, and suffer a fatal seizure in the shock of our own deliverance from the monster Opec?

The outcome is likely to be more prosale, and hangs really on three questions: is there really an oil glut? If so, can the cohesion be maintained? And in that case, what policy seems likely best to aerve its collective interest?

offective Interest?

On the first question the International Energy Agency in Paris, the paid consumer watchdog, gives a clear answer; the glut is largely an illusion produced by de-stocking on the bope of a price break; in the longer run we face shorlage. However, recent oll activity off California and in the China Sea, to name but two does raise. to name but two, does raise another possibility: there may, in the long run, be an abundance of bigh-cost oil.

In these circumstances it still seems overwhelmingly likely that Opec will gel its act together, as it always does—after all, it is in the long-run interest of every individual member and producing non-member, and self-inlerest, as markel theorists are happy to remind us, is what makes the market

world go round.

But self-interest might at this But self-interest migbl at this stage suggest a slight price adjustment—just a few crucial, marginal dollars to remind those developing high-cosl fields thet they face risks as well as polential rewards, and slow them down. Even this shock—a survivable one—is only an outside possibility; but so far, at least, I will bedge my bet. at least, I will bedge my bet.

Lombard

Mr Basnett's warning

By John Lloyd

ing at a Labour Party conferto) then steadily escalating ence on economic policy last industrial action is the only weekend that another five years alternative. of Tory rule could see the unions become an insurrectionist force was deliberate—though he cannot have meant it to blot out, by the coverage it received, his own and Mr Peter Shore's more substantial comments on

Labour's programme.
On one level, the warning was absurd. British unions have been less insurrectionist or prone to violent struggles than prone to violent struggles than any in the world. British labour's insurrectionary period was in the early part of the 19th century during the making of the working class; ever ance that class's organisation in mid-century by canny men in mid-century by canny men like Mr Basnett, it has been constitutional, suspicious of revolutionary talk and never seriously attracted by revolutionary action—to the inlense trritation of guest-revolutionaries such as Marx and Lenin. The movement's genius was Bevin, whose life was a testimony to the evills of maximismony to the skills of maximis-ing strength through bargaining and compromise.

But at another level, the warning may be seen as a dramatisation of a real dilemma. The union movement's centrist leaders—and Mr Basnett is an epicentrist—have for the past three decades put an immense store on consensus, deals at national level, and give and take. For the past three years they have had no consensus with government, struck no deals, have given but been unable to

take. Their authority is ulti-malely np for challenge, Into this unhappy stale of affairs erupts Mr Arthur Scar-gill, consensus-hater and polariser extraordinary. Present and past governments are much the same to bim; none of them has delivered everything immediately, even when commanded to do so by party conference or the mineworkers' executive. Mr Scargill poses a different set of ideological presumptions: lhey are based on the use of industrial strength to attain any and every demand. Capitalism must make vasl concessions: its crises are no fault of, indeed nothing to do with, the workers. If it

MR DAVID BASNETT'S warn- does not (and it is not expected

This is logically insurrec-tionist, but the logic of the positioo is disguised because the strikes have not materialised -the challenge is dissolved in practical terms. But it remains a challenge at the policy-making level because the unions' ability to bargain with government is so weakened as to be non-exist-

Yet Mr Scargill is probably as unlikely to lead an insurrection from the back of his Rover as Mr Basnett from his Vauxhall. A third alternative to consensus with Labour or insurrection could emerge—that of a union movement more inclined to strike pragmatic deals in the centre of politics than to insisi that their members can only realise their aspirations under

For the moment, the unions For the moment, the unions are more closely wedded to the party than ever before; they are set to give it as big a shove as they can come an election, in the desperate hope it can be pushed over the lop. If that fails, there will certainly be no transport with Labour, the transport of the set of rupture with Labour; the two strands of the movement are too closely intertwined for that.

But, certainly on the centre and right, there will be growing pressure for a slackening of the ties and a corresponding willingness to explore the policies offered by the Alliance and "wet" Toryism, ao that consensus may be found again at a new level.

There are already discreet

There are already discreet signs of such an option; a number of leading officials now feel no particular need to tie themselves to the Labour Party come whal may, particularly when they are reviled as traitors to socialism by powerful as traitors to socialism by powerful groups within it. Nor can they ignore the continuing low popularity of the party, since it is very often their own members who refuse to be recently and their to be tracethered about it. For union re-enthused about it. For union leaders, a road of new flexibility will be second best to a Labour Government by a long way—but still better, for most of them, than insurrection.

Letters to the Editor

Status in education and links with management

Sir,--We in education are our own, namely the British Institute of Management and the National Economic Development Council, for the remedy which they prescribe for the maintee from which we are, apparently, suffering. American historians examining our decline of the nation's "economic weak; and Ger ness is rooted in an educational process which disdains practical skills." These views were reported (December 2) by its techn Michael Dixon. Yet he, like skills. Bull and its cohorts, confuses, turties the issue which rests upon an the Poly understanding of the fundamental NEDC at all difference between education fully.

to Albert Einstein.

Training and technology are not distinguished sufficiently from education in Britain as they are in other European countries. Neither is the same status accorded to engineering, in all its forms, as it is in France, and Germany. Why is this so and where does the problem lie? its technical and manufacturing skills. It is therefore at the further education colleges and the Polytecipies that BIM and NEDC should look most care-

The educational system does not "disregard economically useful skills" (which suggests it is failing to fulfil its purpose), it bas no regard for them at all because its aims and objectives lie somewhere else. At the create prestige courses form and objectives lie somewhere else. At the create prestige courses form out much regard to the property of the possibilities so far no one with developing attitudes of wision of other institutions. The bast a clear idea of how it might mind, with making people think, both analytically and systematically. Education, traditionally, is to do with the study of the arts, with what Lionel Trilling.

Since they were expanded in the profite which save in those disciplants which seem most removed from business will not be involved. Yet imagination and abstract ideas are as necessary to business and science as they senior management have been are to all human endeavours. Given that the BIM recognises out much regard to the profit has a clear idea of how it might both analytically and systematically. Education, traditionally, their own charters, This is clear. The bast a clear idea of how it might was continue to press for possis notwithstanding. The own charters, This is clear. The BIM Crossley.

Wales continue to press for possis notwithstanding. The own charters, This is clear. The bast and the prompts about the property of the possibilities of the profit of th

inalled the education of the appearing over the last decade, imagination, it is worth remember in short, instead of creating grateful to institutions outside bering that the saying that something new by devoting than knowledge" is attributed and innovation much of their to Albert Einstein. energies and direction have gone

> There is no doubt that Britain's conomic bealth depends upon Since they were expanded in

energies and direction have gone into creating institutions which ape the Universities, including their vices one might add. A birlef glance at a Polytechnic prospectus will show a range of courses which have little or nothing to do with training and high technology. Many courses in the arts and humanities often duplicate those offered by most universities.

The BIM's proposal, to make efforts to bring academics into its membership, may be one way in which education and training can advance and be recognised. My one reservation is that teachers in those disci-plines which seem most removed

Energy pricing policy and the cost to industry

From Lord Boardman

Sir,—Your editorial, "Robbing Peter to pay Arthur" (December 13), states that "it is an absurd argument" for industry to ask for energy prices comparable with its overseas competitors. You accept the lower prices charged in France on the grounds that its resources of hydropower give it a natural advantage which should be reflected in relative costs. You ignore the fact that the UK has even greater natural advantages with our North Sea gas and oil. Yet, in our case, those natural resources are subjected to taxation so that UK industry is deprived of the competitive benefit that you happily concide to the French. To a large extent this has been done, as you say, to protect our coal industry from facing up to competition from other fuels.

Your criticism, well-founded, of the projection given to the impression of the position. The public sector from the burdens of cyclical adjustment is aggravated by the apportionment of that loading between the domestic and the industrial consumer. It is the latter antional comparisons. There is little point in providing relatively cheap gas with which to boil eggs it, at the same time, you kill off the birds which lay you kill off the birds which lay

Most of our high-energy-using terms recently offered by SSEB Glasgow

industries are large employers: stand comparison with those

House of Lords, SW1.

reverse this trend.

From the Director of Finance and Commercial Development, South of Scotland Electricity

Sir.-The article by Carla Rapoport (December 7); on electricity charges could convey an erropeous

Average prices for electricity Cothcart House,

industries are large employers: steel, chemicals, refrectories, available in England and Wales, paper, etc. I believe that available in England and Wales, paper, etc. I believe that Naturally there are differences because of our energy pricing in the prices for a particular policy over the past few years, load between different electricities and the jobs that own tariff structure. The comment with them. Surely, it is plaint about penalty clauses is not "absurd" to ask that we also wide of the mark. In fact should follow the practice of the financial penalty for failure tage of our natural resources to deniand is very much lower in reverse this trend. to meet the contracted level of demand is very much lower in England and Wales.

So far seven consumers in the South of Scotland have On wings of accepted the new terms including some major chemical SONG manufacturers, a number in From Sir Geraint Evens proportion to that taking up the terms elsewhere in the UK If it is the case that even after contracted load terms reductions electricity prices facturers at a disadvantage with respect to their continental

Birmingham's

refuse From Mr P. Fox

Sir.—Your item (December 3) on Birmingham City Council's decision to award its refuse collection contract to the direct labour organisation needs clarification.

The tender put forward by the DLO was not the lowest. On a like for like basis, my company would have provided a greater saving for the council. But there is another factor which has not yet even entered into

We undertook to pay around \$350,000 per annum in advance for depot rental; £25,000 per month in advance for vehicle leasing; and £560,000 per annum m the vehicle maintenance de partment. These sums are in addition to the £4m savings we offered the council. Recruitment would have been primarily from the present workforce; minimising the council's redundancy payments.

But mora importantly, unless the DLO forms itself into a separate legal entity. I do not see how the council has changed its position as an employer. The same management team will be controlling the operation and there will be nothing to guarantee that 40 per cent overspending will not occur again.

What could the council do if the DLO falls to provide the service or savings it has promised? Can it penalise it, dispense with it, call in the bond? No! The fact is it will have as little real control over the refuse collection service in Birmingham as it has had up to now. P. J. Fox,

Princhard Services Group. PO Box 116, 34-44 Clifton Street, EC2.

Sir,-On December 6 it was reported that I was responsible for the organisation of the musical element of the rally to be beld with the Alliance leaders at Central Hall, Westminster, on January 20. . I should like to make two points. I am not and have

never been a member of the SDP, although my name has been linked with it without my consent. I am not responsible for organising the choral musical element. All I did was to use my good offices in mak ing contact with the Treorchy male voice choir with the view to obtaining for them a musical engagement (Sir) Geraint Evans.

32, Albemarle Rood,

17, Higheliffe.

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FINANCIAL TIMES

Thursday December 16 1982



CALL FOR BONN GOVERNMENT TO BLOCK TAKEOVER BY THOMSON

'No merger choice' for Grundig

BY STEWART FLEMING IN FRANKFURT

ting polincal pressure to drop its plans to sell out to Thomson-Brandt of France, it has no choice but to accept a merger with the state-owned French company.

Commenting on calls for a "German alternative" to the takeover of Grundig hy Thumson-Brandt, Grundig said: There is no German alternative and such an option will not present itself."

Grundig's statement follows growing disenchantment in West Germany with the idea that the company should fall into French control. The Social Democratic Party is planning to introduce a resolumany about the implications of

Further

military

evidence

in Israel

By David Lennon in Tel Aviv

senior officers intend to appear

again before the commission of In-

quiry into the Beirut massacre of Palestinians in the Sabra and Sha-

tilla refugee camps. This follows a warning by the judicial commission

that the evidence received so far is

They are among nine witnesses

who received such warnings three weeks ago. They were told that they

could testify again, submit new evi-

dence, or cross-examine other wit-

In letters sent to the commission yesterday, the Chief of Staff, the

chief of military intelligence, the of-

ficer in charge of northern com-

mand, and a senior aide to the De-

fence Minister sald they would like to reappear and submit further evi-

But General Ariel Sbaron, the

Defence Minister, informed the

Commission that he did not intend

to avail himself of the opportunity to appear again before the enquiry

The bead of Mossad, Israel's sec-

ret service, who was also cautioned,

informed the commission that he would submit further evidence in writing and would have one of the witnesses cross-examined, but that

be would not submit himself to fur-

ther questioning.
Mr Menahem Begin, the Prime minister, Mr Yitzhak Shamir, the

Foreign Minister, and Brigadier-

General Amos Yaron, commander

of the Israeli forces in Beirut at the

time of the massacre, have all said they did not wish to reappear be-

Golan Heights after a year under

Israel, Page 4

U.S. insurer

buys stake in

Dutch group

By Walter Ellis In Amsterdam

ALEXANDER and Alexander, the world's second-largest insurance brokers, bas acquired 40 per cent of

the shares of Bekouw Mendes

Holdings of Rotterdam for an un-

Bekouw is the third-largest insur-

ance broker in the Netherlands and

was previously part-owned by the

tremely pleased by the deal.

disclosed sum.

many years.

liable to barm them.

nesses if they wished.

GRUNDIG. West Germany's leading consumer electronics group, said yesterday that despite mountain today calling for the Government to block the Thomson-Brandt call development in West Germany. takeover. Yesterday the Christian Social

Union (CSU), the Bavarian sister party to Chancelior Helmut Kohl's Christian Democratic party (CDU), said "the proposal of Thomson-Brandt certainly is in the interests of France to dominate the Euro-pean video and thus the micro electronics market. But it is not in the

for Thomson-Brandt to take a 75.5 per cent interest in the company, concern bas grown in West Ger-

interests of Germany."

announced agreement in principle

Grundig itself disclosed that it had been in talks with Robert Bosch, a leading German electrical concern, and with Philips (which has a 24.5 per cent stake in Grundig) as well as with Thomson-Brandt It was this disclosure which led to discussion of a possible "Germanalternative" to the French company.

Yesterday, bowever, Grundig said In the four weeks since Grundig that neither an agreement on a amnounced agreement in principle partnership with other German companies nor a strategy for Grundig's future could be expected from such discussions because of the di-

It said the talks with Bosch (and through Bosch indirectly with Siemens) had been futile

Philips yesterday promtly rejected Grundig's interpretation, saying that it still had a long-standing in-terest in a broader relationship

Grundig's statements were being interpreted yesterday as a sign of its growing concern that political ohstacles to its proposed deal with Thomson-Brandt are threatening to

ecome insurmountable.
The political dimension is critical the proposal will require a specical authorisation from the Gov-ernment since it is certain to be opposed by West German cartel au-

EEC farm price rises may average only 4.4%

BY LARRY KLINGER IN STRASBOURG

ers may be offered only token increases in the guaranteed prices for their produce next year. Producers in other countries, ISRAEL's chief of staff and other

bowever, where output is geared to West Germany, the reap benefits from the Common Agaround 1.2 per cent. ricultural Policy, could gain a relatively substantial rise.

several key issues to resolve, hut it is understood that the plan, as it stands, suggests one of the smallest average price increases for 10

At a meeting which ended late on Tuesday night, the 14 Commissioners were reported to be broadly in agreement on an average farm price increase of around 4A per cent for next year.

Only in the late 1970s, when mountains of surplus produce reached alarming proportions, were crices set lower.

The net impact in the 10 EEC countries, bowever, would vary widely because the Commission is also considering adjustments in the "green" exchange rates through which farm prices, fixed in European Currency Units (Ecus) are

BRITISH and West German farm- valuations of the "green" pound and D-Mark - both undervalued against the Ecu at present - UK farmers could expect an average farm price increase of only 1.6 per cent. In West Germany, the rise would be In France, on the other hand, tak-

ing into account a devaluation of The European Commission, the overvalued "green" franc, farm-which has been drafting its propos-als in Brussels this week, still bas age rise. They could even bope for an increase of around 10 per cent if the Government pressed for the full advantage available under the EEC's agricultural monetary arrangements. Similarly, Belgium and Luxem-

bourg could win increases of 9.4 per cent and 9.1 per cent respectively. Italy, with a potential 4.7 per cent, might also take advantage of further possible adjustments in its monetary arrangements to add a further 3 percentage points to the

final award. Before the New York price package comes into effect, however, the Commission's proposals bave to be approved - and possibly changed -by the Council of Ministers. While the agricultural lobby bas

been pressing for substantial price increases, several daunting political translated into national currencies. and economic factors militate

These include rapidly growing surplus production, increased oppo sition by the world's other major food exporters to "unfair" EEC competitioo, the fact that Community farmers bave seen substantial increases in real incomes over the past year and, possibly most impor tant, the expected strain on the EEC hudget if the cost of subsidising the export of surpluses is not

Financial experts estimate that even a package along the lines un-der discussion - which includes penalty reductions in price propos-als for recent growing surplus protors - could cost the EEC budget an extra £353m (\$570m) over the next

agricultural year.
Prices rises being considered, including penalties, are 3.2 per cent for milk, 3 per cent for cereals, less than 4 per cent for sugar and around 5.5 per cent for meat. For Mediterranean produce such

as wine, fruit and vegetables, tobacco and coffee, the Commission's views are still widely apart, but the discussion is understood to be ranging between 5.5 per cent and 7 per cent for various products.

The Commission is now not due to resume its discussions until next

Timing of UK budget rebate in doubt Timing of the budget rebate in doubt Timing of the specialised Thomson-Brandt

BY LARRY KLINGER IN STRASBOURG

EARLY payment of Britain's £500m (\$805m) European Community budget repayment last night hinged on 11th bour negoliations in Strasbourg between the European Parliament and the 10 EEC member

states' budget ministers. Amid signs that both sides were willing to compromise over political declarations on future restructuring of EEC budgetary policy, several serious problems were far from being resolved as the negotiations moved late into the night.

It was also uncertain whether

ficient to sway enough dissenting MEPs when the crucial secondish Exchequer.

reading vote is taken today.

The Parliament voted 229-83 on Tuesday night to lay down a stiff demand for its approval of the Britlsb deal, which also involves contentious measures worth £124m to West Germany.

These included a commitment by the member states that they would embark on a programme of budget

er than simply benefiting the Brit-The ministers indicated that they

might be prepared to commit themselves to a restructuring policy, and the parbamentarians indicated a possible willingness to commit their side not to use any immediate reclassification as a precedent to extract further concessions.

Nevertheless, the ministers made clear that they were not prepared to restructuring to avoid any further enter into any commitment that ad hoc deals similar to Britain's, would lessen their budgetary powand that the monies to be reim- ers at the expense of increasing bursed now be reclassified to en- parliamentary control on EEC tween the parliamentary negotia- sure that they are primarily spent spending, a stance unlikely to sway tors and the ministers would be suf on social and regional projects rath- many militants in today's vote.

UK health dispute collapses

BY IVO DAWNAY, LABOUR STAFF, IN LONDON

(NHS) pay dispute collapsed last when unions voted to end nearly nine months of struggle following only 90 minutes of debate.

The decision came when the Trades Union Congress' (TUC) biggest brokers of all, Marsh and McLennan. bealth services committee voted by A member of the Bekouw board 13 to eight to ignore some unions' of directors said last night that both calls for a one-year deal, and in-stead to accept the full Government package of 6 to 7.5 per cent for the Bekouw and Alexander were excurrent year with a further 4.5 per cent for 1983-84. The Marsh and McLennan connection resulted from McLennan's

recent takeover of the large London brokers, C. T. Bowring, with which Earlier yesterday, the Royal College of Nursing, which is not affil-Bekouw had been involved for iated to the union movement, an-nounced the outcome of a ballot of Since McLennao already had a members showing a 7 to 1 margin vital Dutch interest, through its in favour of accepting the deal.

Mr Norman Fowler, the UK Soholding in Hudig Langeveldt, it was cial Services Secretary, immediately welcomed the decisions. This is agreed that Borwing's shares in Be-kouw should he sold back to Bea good day for the health service. It

tial job of caring for patients," be

The terms of the settlement are certain to be greeted by the British Government as a triumph for its policy of dogged resistance to large pay claims. The unions' acceptance

Details of the allocation of the new money will be decided at a series of meetings of Whitley Councils - the NHS's main negotiating forums - over the next few weeks. The Nursing and Midwives Whitley Council, which has already presented the package as a single 12.3 per cent rise backdated to August, is likely to finalise agreement today

THE UK's National Health Service means we can get back to the essen- on behalf of nearly 500,000 NHS

bert Spanswick, chairman of the TUC committee and general secretary of the Confederation of Health Service Employees, repeatedly de-nied that the unions bad "caved in."

also provides a major boost for the call of our campaign, we have got an extra 3½ per cent for other groups. an extra 2 per cent for other groups. We bave also forced the Government to produce a special cash limit for health staffs next year," he said.

Mr Rodney Bickerstaffe, general secretary of the National Union of Public Employees, which bad sought a one-year deal, said, he was "bitterly disappointed" with the outcome of the dispute.

UK pay settlements lower, Page 7 hearings

Honeywell **Bull** to get state cash and new structure

By David Marsh in Paris

CII HONEYWELL Bull, the French state-controlled computer group, is putting into effect a major re-group-ing of its activities in a hid to restore profitability and carry out Government plans for a strengthen-ing of the country's information

The restructuring is designed to break the group down into a number of decentralised profit centres, along the lines of the U.S. computer

At the same time, the company's complicated shareholder structure is being modified to give more direct control to the French state. The Government is also preparing to grant a large infusion of extra funds to boost the group's inade-quate capital base, which has been one of the main factors behind its heavy losses in recent years.

The French state, which is in the process of buying out residual French private stakes in the company, has a majority share through indirect holdings, Honeywell of the U.S. owns 20 per cent.

The American company reduced its stake from 47 per cent under this year's nationalisation moves.

The group - capitalised at FFr 860m (\$124m) - is held to be sadly sbort of sbareholders funds. The low equity base and towering debt charger were prime reasons for the FFr 491m loss in the first half of the year, which according to unofficial estimates could rise to above FFr 1bn for 1982 as a whole.

The company bas already been allocated by the Government a preliminary slice of FFr 850m in aid for this year. A further amount - which some reports put as high as FFr 1bn is due to be decided shortly. It is expected at least to double capital.

The restructuring measures bave not all been decided, and are due to be nut to the staff on Friday. They centre around giving a pivo

tal role to the present holding company, Compagnie Machines Bull (CMB), around which will be grouped four main subsidiaries or

These will be in the fields of miccompany, Sems; peripherals; and medium and large computers.

Cii Honeywell Bull is also setting up a special subsidiary to promote the so-called "smart cards" - plastic cards containing microprocessors which can be used for a variety of purposes, from making bank pay-ments, paying for telephone calls or carrying medical or security infor-

U.S. attack on Japanese steelmakers

Continued from Page 1

valuation of the yen, which Mr Rod-erick said should stand between Y190 and Y200 to the dollars, compared with its current value of over Y245.

Mr Roderick did not disclose the details of his legal arguments in advance of the petitions being pre-sented to Mr Brock today, but U.S. trade official expressed some consternation at the breadth of his de

mands. They were particularly concerned about the issue of the yen exchange rate, which could be taken up by any other industry affected by Jap-anese competition. The American fron and Steel Institute, however said that all the industry's claims including the levy to compensate for the yen exchange rate - would be fully justified under Gatt and

U.S. trade laws. After the petitions are filed, the U.S. trade representative will have 45 days to decide on whether to initiate an investigation. This would be followed by 30 days of public

Continued from Page 1

of President Leonid Brezhnev. There has been no precise and for-mal expression of these ideas, and before negotiations resume at the

cated an awareness over the public concern about the desirability of a dual key control under which the UK would be involved alongside the U.S., as happens with other missiles

Nato would continue to review its Mr Pym's remarks with those of

U.S., as happens with other missies in Britain. But no arrangements have been agreed. Mr Pym also indicated that no decision was irrevocable.

On shorter-range hattlefield nuclear weapons, Mr Pym said that Mr Pym's. But Dr Owen contrasted which, he said, was insuracient in sitelf.

There were similarines in some which, he said, was insuracient in sitelf.

The differences of emphasis with in the Labour Party were highlighted by Mr Tony Benn, who stressed Labour's commitment to a completely non-nuclear defence policy.

Mr Healey, in characteristically authoritative form, argued for an MPs now recognise that nuclear approach between the zero-based disarmament has become a major option and the reported Soviet offer to halve the number of SS20s, which, he said, was insufficient in

THE LEX COLUMN

New facing for **London Brick**

Buyers of Ibstock Johnsen on hopes of a takeover are not going to be bowled over hy the London Brick offer price. The mainly paper terms year ago. work out at 96p a sbare, and the underwritten half-cash alternative at 90%p. This compares with net as-sets of 192p in the latest balance sheet, although the figure may fall to about 160p after this year's losses and the looming write-off in the Netherlands.

In the UK, Ibstock's trading performance has been resilient, but the company has been dragged down by losses and the associated financing charges of overseas acquisitions made precisely at the top of the pre-vious cycle. With U.S. building starts picking themselves off the floor, and measures in train to stem the Dutch drain, profits should reemerge next year in the region of emerge next year in the region of \$23m, implying an exit price earn-ings below 20, fully-taxed, on half recovered earnings and only limited earnings dilution for London Brick

Although Ibstock's net debt is above 50 per cent of sharebolders funds, the company seems in no un-minent danger. So while the two companies will be emphasising the unfathomable gulf between fletton and premium facing bricks, there must be a strong chance of a monopolies reference - reflected in Ibstock's price of 93p yesterday. The "for sale" sign is firmly in place over Ibstock, and at this starting price there must be a string of companies running their fingers over the calculator keys.

Cable and Wireless

Opponents of privatisation could bave a field day in the Commons with the interim figures of Cable and Wireless. The 47 per cent leap in pre-tax profits - to £67m - was well ahead of outside expectations and the shares, which have been bounding up all week, added an-

other 16p to close at 350p, more than double the level at which they were offered for sale just over a

Comparisons are considerably distorted by the relegation of Bahrain to associate status and by the sale of a 20 per cent minority in Hong Kong. Moreover, C & W has had the offer for sale proceeds to play with for a full six months and exterous currency management has thrown up a £5m addition to trading profits. Even so, underlying profitability has evidently been moving ahead strongly at a time when traffic volumes are feeling

the recessionary pinch.
The greatest margin improvement has been in the U.S. which is now back in healthy profit thanks mostly to a reduction in routing costs in the TDX business. C & W has similar quantum leaps in engi-neering technology still to exploit elsewhere but, on a prospective yield of around 3.3 per cent, the shares are also discounting the fu-ture potential of new projects in China and the UK.

The recent rally of the Tokyo stock market is discounting a recovery which seems to be receding into the distance. Yesterday's consolidated half year figures from Toshiba, one of Japan's blue chip electri-cal groups show sluggish or declining markets across virtually the whole range of its diversified activites. After a 12 per cent fall in net profits last year, the group is showing a 16 per cent half year decline at Y18.5bn, and the company now admits that it will miss earlier forecasts of around Y50bn profits for the year by a mile.

With Hitachi, the largest of the electrical companies, also scaling down its end year targets, and Sony losing momentum in dramatic fash-

spending. Electronic components are providing about the only bright spot for the industry but, although Toshiba is benefiting from this buoyancy, it is accelerating more slowly than the competition, at a heavy cost in R and D expenditure. The group's share price is given some support by more encouraging parent company forecasts. But the shares fell Y14 to Y366, where they still seem to be looking a full year ahead to a recovery in Japanese nuclear power contracts.

H. P. Bulmer

Licensed outlets selling keg cider have doubled since 1979 and total cider consuption is now growing by 20 per cent annually. H. P. Bulmer, which still enjoys over 50 per cent of this booming market, has com-bined an 16 per cent volume sales gain in the balf-year to September with two price increases with 10% per cent, lifting turnover 28 per cent to 5443m. The UK group has bought shrewdly in the apple and juice concentrate markets to con-trol its costs and the result, aided by a lower interest charge, adds up to a pre-tax profits gain for the peri-

od of 62 per cent, to £7.24m.

Bulmer's high flying shares rose another £1% yesterday to £11, where the prospective yield of under three per cent reflects plenty of optimism that the sudden fashion for cider drinking can be sustained - though no-one pretends to understand it. The second unknown factor, though, must be the future competition for this new demand, at present effectively shared by only three companies. Total cider sales at £250m today are already much bigger than the UK stout market which Guinness nurtured so successfully in the early 70s and at least one company, Avana Group, is believed to have plans to launch a ion. Toshiba's performance con- cider brand early in the new year.

ASTON MARTIN TICKFORD. JUST ONE OF THE MANY SUCCESSFUL COMPANIES IN MILTON KEYNES 3 COMPANIES A WEEK MOVE TO MILTON KEYNES, CONTACT, COMMERCIAL DIRECTOR, MICTON KEYNES DEVELOPMENT CORPORATION, WAVENOON TOWER, MILTON KEYNES MK17 8LX. TEL-MILTON KEYNES (0908) 74090;

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Pym pledges Nato arms flexibility

there will be Alliance consultations end of next month.
On the cruise issue, Mr Pym indi-

The large attendance and emotional intensity of the three-hour emergency dehate showed how

political issue. There were similarities in some

stockpile in Western Europe to ensure that the numbers and types available are no more than is required for effective deterrents.

Prime Minister Margaret Thatcher,

"The recruiting sergeant for unilateralism" – and Mr Healey's approach with that of much of the rest of the Labour Party.

in the Labour Party were highlighted hy Mr Tony Benn, who stressed Labour's commitment to a com-



SECTION II - COMPANIES AND MARKETS FINANCIALTIMES

Thursday December 16 1982



and Allied Trades. Northampton 52424.

Fluor halves profits in quarter:

FLUOR, one of the largest U.S. construction and civil-engineering groups, which last year acquired St Joe Minerals, yesterday reported a 4 per cent decline in net earnings to \$152.8m in its latest fiscal year, ended October 31, from \$158.9m in the previous 12-month period.

But earnings were sharply down in the last quarter of the fiscal year. In Fluor's latest three-month period, net earnings were halved to \$32.3m compared with \$64m in the last quarter of the previous fiscal

The company also reported a decline in new orders in the latest quarter to \$895m compared with \$944m in the fourth quarter of the

Reveoues in the latest fiscal year totalled a record \$7.3bn compared with 56bn. In the latest quarter, revenues were slightly lower at \$1.8bn compared with \$1.9bn. Fluor acknowledged that its dis-

tribution services group had been seriously depressed by the decline in the U.S. onshore oil and gas drilling market, where the company sells large amounts of tubular

Volvo in employee plan

By William Dullforce in Stockholm

VOLVO, the Swedish aatomobile. industrial and trading group, is launching a profit-sharing scheme for its 53,000 employees. Out of anticipated 1982 pre-tax earnings of SKr 2.5ba (\$338m) it is estimated that between SKr 35m and SKr 40m

will be passed on to the employees. Local leaders of the trade unions, which have aegotiated the scheme with Volvo's management, deny that it pre-empts in any way the wage-carner investment funds which the new Social Democrat ducing, and which are a highly con-troversial element in the present relationship between the Government and Swedish industry.

Under the Volvo scheme, employees will hold shares individually in a trust administering the allocated profits. The wage-earner fund pro-posal assumes that corporate prof-its would go to collectively-owned

The Volvo scheme is described as a "bonus system" directly related to the group's profit performance. It will run for a trial three-year period during which the profits allocated to the employees can vary from nothing to a maximum of SKr 180m.

Security Pacific buys stake in Ralli

By Paul Taylor in New York SECURITY Pacific Corporation, the Los Angeles-based banking group.

is to purchase a majority stake in Ralli Brothers (Bankers), a Geneva-based private bank with assets of about SwFr 83.6m (\$40.3m). Security Pacific, which is the holding company for the 10th largest bank in the U.S., said the acquisition of a majority stake in Ralli, of up to 70 per cent, fits into its longer-

term strategy for providing worldwide cash management services. Ralli Brothers is a wholly-owned subsidiary of Ralli Corporation and ranked 85th mut of 107 foreign banks io Switzerland last year.

Krupp and Hoesch lose faith in steel merger

on February 4. On that day, the su-pervisory boards of Krupp Stahl and Hoesch, two of the largest West German steel groups, announced they would seek to merge their steel operations in a new concern was ready to bless the alliance with

Since, then, prospects for the "elephants' marriage" as it is widely termed have gone from bad to worse. Dr Wilhelm Scheider, chief executive of Fried Krupp, the Krupp Stahl parent, said recently. "The German steel industry will not survive another bad year in its

Well into a second and more bruis- ing round of the steel crisis, both-	WEST OF	MAN STE	EL 1981
companies were looking for cuts in capacity and rationalisation. Hoesch's 10-year alliance with Hoo- govens of the Netherlands was com-	Courpeny	Sales (DM ha)	Production (in tonnes orude steel)
ing to an end in a welter of recrimination, but the foundation of thet alliance - that Hoesch's steel-finishing operations in and around Dortmund are best supplied with crude steel from a more favourable site -	Thyssen Fried Krapp Hoesch Klöckner- Werke Selective	28.2 14.8 8.0 5.8	11.1 4.9 4.7 4.8

However, it is broadly accepted at Krupp that there is little hope of Ruhrstahl getting off the ground in its present form in the immediate future. Dr Rohwedder told a shareholders' meeting in Dortmund in November that Hoeseh would go it

alone if necessary.

One reason behind the loss of enthe merger would be complete by the end of this year. The state gov-ernment of North-Rhine Westphalthusiasm is that the inevitable ia, which covers the Ruhr, was in favour, the unions were anxious to clashes of corporate self-interest have been sharply aggravated by the new collapse in steel demand

IT SEEMED such a good idea back mund, and the Bonn Government since July, which one German steel expert describes as a "free fall".

> This year, West Germany's steelmakers will probably produce bittle more than 36m tonnes of crude steel, against 53m tonnes in 1974, the last good year, and 42m tonnes in 1981. The European Commission will probably lop off another 2m tonnes of German production at the beginning of next year as part of its crisis regime. Over half the German steel workforce (in its narrowest sense) is on short time.

Next year, the German steel industry is expected to lose as much as DM 3bn (\$1.23bn) which could produce major problems for Salzgitter, the state-owned producer un-comfortably sited near the East German border – although Salzgitter managed to ride higher EEC first-half steel prices to a small profit in the year ending in Septem-

In the Saarland, where a Ruhrstahl-like concept had been intro-duced in 1977-78, the central Saar-land steelmaker, Arbed Saarstahl, had to be rescued this moath with a new injection of government funds. It is now recognised, not least by the Commission in Brussels, that there will have to be further savage cuts in capacity on the Saar despite the fact that the concern is now pro-ducing only 130,000 tonnes a month against the 165,000 tonnes foreseen

The new crisis has brought to the fore a host of other and conflicting



Dr Detlev Rohwedder

merger ideas, many of which go back to the mid-1970s or further. But many in the Ruhr also see a darker side to Ruhrstahl's lack of progress. Herr Reimut Jochimsen, the Social Democrat Economics Minister in North Phine Westehel. Minister in North-Rhine Westphalia, said this month that "those who find the Ruhrstahl plans uncomfortable are trying to strangle the con-

cept."
At the beginning of September,
Thyssen and Krupp Stahl announced they intended to merge
their special steels operations.
Round at Hoesch, Dr Rohwedder



Dr Wilhelm Scheider

there were widespread fears among the unions that a new Thyssen Krupp axis would destroy Dort-mund as a steelmaking ceatre. Some observers harked back to 1963 when Thyssen was blamed for effectively torpedoing co-operation between Mannesmann and Hoesch. A two-page cartoon in this moath's edition of Capital magazine portrays Thyssen's Dr Dieter Spethmann in the garb of a gladiator, standing alone on the bloody sand while the champions of Krupp, Hoesch, Arbed Searstahl, Klöckner-Werke and Saizgitter lie dead or dy-ing around him.

Publicly, Krupp continues to argue that Ruhrstahl has right of way and that its 50 per cent share in the new special steels operation would be brought into Ruhrstahl. However, company officials point out that Ruhrstahl offered no rationalisation possibilities in the special steels area. With the market for these alloys falling sharply, the merger with Thyssen could not be overlooked," especially as it would cut 4,000 duplicated jobs.

In recent weeks, the Krupp-Thyssen talks have progressed into other products, and 10 days ago Krupp again stunned the Ruhr by announcing a 10 per cent reduction in its workforce (and capacity) at Rheinhausen, thus cutting away at the very basis of Ruhrstahl. "The time for Ruhrstahl has probably passed," Herr Jochimsea said.

The Bonn Government is sticking to its position that "company tran scending" solutions are the only answer to the crisis. But aware that its action on the Saar will unleash a tide of demands for similar treatment, the Economics Ministry has appointed a commission to look at merger possibilities and report back aext month.

"Without doubt, the best answer would be a North-Rhine Westpbalian model involving Krupp, Hoesch and Thyssen, one steel ex-ecutive said earlier this month. "But how would the others compete with a 20m tonne giant?"

Thyssen benefits from steel reshape

By James Buchan in Bonn

THYSSEN Industrie, the steel manufacturing arm of the Thyssen industrial group of West Ger-many, enjoyed a dramatic im-provement in net earnings in the year up to end of September thanks to a drastic rationalisa-

tion programme.

Dr Werner Bartels, chief executive, said that he would recommend that a net profit of DM 78.7m (\$32.2m) be transferred to the parent group, compared with DM 10.3m in 1980-81.

Thyssen itself announced last week that it would maintain its 1981-82 dividend at last year's lower level of DM 2 per DM 50 share, despite the deterioration of its steel business since the

Dr Bartels said world sales Thyssen Industrie were down 0.7 per cent to DM 5.4bn, with difficulties at the two Brazilian subsidiaries contributing to a 2.3 per cent in sales of overseas compa-

companies grouped within Thyssen Industrie increased their orders booked by 10.4 per cent to DM 5.71bn over the high level achieved in 1980-81. Again, however, the overseas subsidi-aries suffered from weak de-mand with orders booked falling

2 per cent to DM 367m.

The chief contribution to the better 1981-82 result came from the rationalisation of the domestic units, many inherited with the wholesale takeover of Rheinstahl in 1973. Dr Bartels said that only three of the 13 units were in the three of the 13 units were in the red, largely through restructuring of the foundry sector, which had been hit by the decline in demand for heavy castings.

Thyssen Schalker Verein, which suffered a sharp drop in sales in 1960-81, recovered strongly with a 12.1 per cent increase in sales.

Weak pound boosts Cable & Wireless

BY JASON CRISP IN LONDON

which would rival in size Thyssen,

the West German market leader

and the largest steel group on the European continent.

The creation of "Ruhrstahl"

seemed to make every sort of sense.

Why not supply Hoesch from Krupp Stahl's works on the banks

of the Rhine at Rheinhausen in the

vestern Ruhr, the best site in Ger-

many for the manufacture of crude

Dr Detlev Rohwedder, chief ex-

ecutive of Hoesch, promised that

still held good.

CABLE & Wireless, the UK telecommunications group, surprised the City yesterday with much higher profits than expected. In the six months ending September 1962, pre-tax profits rose by almost 50 per cent to £67m (\$108m) while turnover rose less than 10 per cent.

With most of its income derived from overseas, the weakness of the pound boosted trading profits of 254m by 25m. Excluding the currency gain, reported trading profits rose by just under 20-per ce One of the main reasons for the

The pre-tax profits were stormed by an increase in income from investments and leasing, which rose from £4m in the comparable period last year to £13m.

After taking these disposals, underlying trading profits are beings were sharply lower at \$172.3m compared with \$316.6m in the previous 12-month period.

sold almost half the shares of Cable & Wireless at 168p a share. Yester day it closed at 350p, up 16p. Cable & Wireless said investm income would reduce annually by

ment in January this year. A substantial part of Cable & Wireless's business comes from its franchise operations, where it inin countries and receives a share of operating revenues. The two largest are Hong Kong and Baluran.

In July last year it sold a 60 per cent stake in its Bahrain operation

Dresser earnings decline

£3.5m after an exceptional tax pay-

fiscal 1982 earnings.

The setbacks reflected the depressed economic climate and especially the slump in the U.S. oilfield pany's performance.
Dresser's earnings in its latest

nications business.

The pre-tax profits were boosted by an increase in income from investments and leasing, which rose from £4m in the comparable and in September it sold 20 per cent of its. Hong Kong business to its government.

After taking these discounts and leasing, which rose from £4m in the comparable and its stake in its Bahrain operation \$94.8m in the last quarter plunged to \$16.5m from \$94.8m from \$94.8m in the last quarter plunged to \$16.5m from \$94.8m from

DRESSER INDUSTRIES, the large

Dallas-based oil service company, reported yesterday a sharp decline in both its fiscal fourth-quarter and

industry. The company said the U.S. Soviet pipeline trade embargo had little overall effect on the com-

Toronto Stock Exchange plans to offer equity futures contract

BY NICHOLAS HIRST IN TORONTO

January 27 has been set as a tentative start-up date for the new con-tract, based on a basket of 10 broadly traded Canadian stocks. The con-tract is still subject to ratification by the Ontario Securities Commision but no problems are expected. Unlike equity futures contracts more easily.

offered in the U.S., which are delivered by a cash payment, the Toron-to contract will be for delivery of

100 shares each of the underlying. The equity futures contract is one of several innovations planned by the exchange. On January 12, silver option trading on a 1,000 ounce contract will be added to options already available on 45 stocks.

The new 30,000 sq ft trading floor will have capacity to trade up to 70 classes of options. Discussions are under way in the

Ontario Securities Commiss

THE TORONTO Stock Exchange, permit listing of a new "junior markets and market developclass" of shares with fewer shareclass" of shares with fewer shareclass" of shares with fewer shareof markets and market development for the exchange, said: "I
than are permitted at the moment.

At present a listing requires a

the company must have working a contract started in September

raising money on the exchange securities.

Under its proposals, which are expected to be agreed in mid-January, a small company can come to the exchange for an initial raising of capital through the sponsorship of an exchange member. To gain a market listing, the sponsor must gather 200 shareholders raising a minimum of C\$350,000. There is no market listing a minimum of C\$350,000. is no requirement to issue a full

It is expected that between 20 ket through this system in the first rear.

Come part of a new Avidence and the first Exchange allowing wider membership than the Stock Exchange does.

At present a listing requires a tage to high tax companies, of minimum of 300 shareholders and which Canada has a great number."

The equity futures contract joins The exchange now wants to give tures of 18 years, five years and smaller companies the chance of short-term Canadian Government

> contract will be C\$2,500 for a speculator and half that for a hedger. The 10 shares making up the bas-ket are Alcan Aluminium, Bank of Montreal, Bell Canada, Canadian Pacific, Gulf Canada, Hiram-Walker Resources, Imperial Oil "A," Inco, Moore Corporation and the Royal Bank. The 10 have followed general market trends very closely over the

With the interest rate contract. the equity futures contract is to beand 50 companies will come to mar- come part of a new Toronto Futures

AT&T up 7.4% in year

BY OUR FINANCIAL STAFF

AMERICAN Telephone and Tele- \$16.6bm, up 9.2 per cent from 30 were because of a continuing graph, the dominant U.S. telephone company, has reported a 3 per cent dip in fourth-quarter net profits to \$1.84bn from \$1.9bn a year earlier. For the full year ended November 30, however, net profits were ahead by 7.4 per cent to \$1.21bn from \$6.7bn. The full-year result was in line with the expectations of Wall

Fourth-quarter revenues were

\$15.22bn a year earlier. Full-year revenues were \$84.59bn, up 12.7 per cent from \$57.3bo a year ago.

Earnings per share were \$2.07 on an average of 872.4m shares in the fourth quarter, compared with \$2.31 on 809.5m shares a year earlier. Full-year earnings per share were \$8.38 on an average of 843.2m.

AT&T said its lower earnings for the three months ended November

lack of growth in the economy. "Indicators of demand for our services, such as calling volumes and new customers connections, were sharply affected" by the economy.

AT&T said while it expected an upswing in the economy some time in 1983, it did not expect the recov ery to be as strong as those that have followed other post-World War



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Berliner Handels- und Frankfurter Bank

Chemical Bank International Group

Rhône-Poulenc in UK rationalisation plan BY CARLA RAPOPORT IN LONDON

RHONE-POULENC, the loss mak- these normally acted as local ing French chemical group, is agents for the Rhône-Poulenc rationalising its UK operations in chemical pusiness. an effort to improve their cost-effec-

The move will be accomplished by merging the business of Rhone-Poulenc (UK) with May & Baker, the UK-based pharmaceutical and chemicals group, which is wholly-owned by Rhoae-Poulenc. May & Baker said yesterday the 770m (\$111m) against FFr 569m a

move would increase the group's turnover by about £70m (\$113m) to some £300m worldwide in 1983. The merger will take effect from Janua-Dr Keith Humphreys, managing director of M & B, said yesterday itial task will be to merge the two

Rhone-Poulenc, which was re-cently nationalised by the French Government, has been in loss for two years, its pharmaceutical business, however, has been growing Last year, for example, Rhone Poulenc's health care division showed operating profits of FFr

year ago. Sales went up to FFr 6.8bn from FFr 5.7bn. M Alain Coine, currently manag-ing director of Rhône-Poulenc (UK), will join the board of directors of May & Baker from January. His inthe rationalisation would bring the operations, with the aim of preservcompany's UK operations into line ing the marketing strengths of with its overseas subsidiaries, as both.

Fixed-interest bond prices marked down

BY ALAN FRIEDMAN IN LONDON

year floating-rate note issue ap market pears to be selling reasonably well. In Sw

Seiyu Stores' \$50m five-year 11 nese paper on the Swiss market. Seivu Stores sound have your factory per cent issue was priced as indicated at 95%, to yield 12.26 per cent at day amounced that it has filled a day amounced that it has filled a s400m shelf registration with the

PRICES of fixed-interest Euro- rate notes for Credit d'Equippebonds in the dollar. D-Mark and ment, the French state small busi-Swiss franc sectors were marked ness development agency. The paaround 'A point lower yesterday af- per, guaranteed by France, carries ter another day of quiet pre-Christ a margin of 1/2 per cent over the mas trading.

London Interbank Offered Rate (Limas trading.

London Interbank Offered Rate (LiSociété Générale's \$160m, eightbor) and is aimed at the Far East

In Switzerland, the new SwFr not least of all because when the is- 100m eight-year issue for Chugoku sue's attached warrants - to buy Electric Power was priced yester-11% per cent 1989 bonds - are day above its indicated 8 per cent stripped away, the floaters are be- yield with a 6% per cent coupon at ing quoted at around 99. The war-rants were quoted last night at higher than anticipated yield can be traced in part to the surfeit of Japa-

Paribas Asia is planning to place

U.S. Securities and Exchange Comon Friday \$100m of 10-year floating
mission.

INTERNATIONAL COMPANIES and FINANCE

Restated PepsiCo results show 25% earnings drop

NEW YORK - PepsiCo, the U.S. soft tion had shown that operating profirregularities in its overseas opera-tions, resulting in a reduction of tions, resulting in a reduction of earnings over the period of \$92m or year's fourth quarter would reflect

6.6 per cent. PepsiCo will take a \$79.4m charge in the fourth quarter, for e reduced valuation of inventory assets at company-owned overseas bottling operations.

The move, coupled with other

charges and the downturn in the economy, will produce a 25 per cent decline in full-year earnings below last year's restated \$3.22 per share. PepsiCo said that about 58m of the 592m of earnings, reduced over the 1978-1982 period, were recorded

in the first nine months of this year. adopted. The revision lowered nine-month earnings this year to \$264.9m or to \$3.22 a share from \$3.51 as reported \$273.0m or \$2.91 a share.

drinks maker, has restated its 1978— its at its Mexican and Philippine bottling subsidiaries had been overstated by about \$85m.

a Sim charge from the closing of a loss-making plant in Dusseldorf, West Germany. PepsiCo also said it expects a "significant improvement" in 1983

financial results, primarily in the second half of the year.

All senior management and a number of middle management employees at the Mexican and Philippine bottling operations have been replaced, while more centralised fi-nancial controls and more stringent

\$2.82 a share, from a previously re-ported previously, and 1980 net was orted \$273.0m or \$2.91 a sbare. revised to \$2.86 a share from \$3.20; PepsiCo bad previously an 1979 net to \$2.70 from \$2.85 and 1978 net to \$2.40 from \$2.43. Reuter

Federal-Mogul sees sharp setback

FOURTH-QUARTER earnings of The surprise plunge, which is Federal-Mogul are expected to steeper than some Wall Street anaplunge by more than 75 per cent to less than \$2m or 12 cents a share, oration in the fourth quarter that according to Mr Thomas F. Russell. the U.S. group's chairman and chief said.

we didn't really project," Mr Russell executive.

Dozens of customer plants that
This compares with net earnings

make farm construction and indus-

of \$7.6m or 59 cents a share in the 1981 fourth quarter, and suggests total fiscal 1982 profits of under botal fiscal 1982 profits of under 525.6m or \$1.94 a share, against 535.2m or \$2.82 a share previously.

gul's biggest customers has been closed by a strike. Federal Mogul makes parts for cars, trucks and heavy-dnty vehicles, for machinery and for aircraft. Fourth-quarter sales are expected to amount to between \$150m and \$160m, against \$194.6m previously.

+8% 7.55 +8% 7.55

FINANCIAL TIMES INTERNATIONAL BOND SERVICE

The list shows the 200 latest international bond issues for which an adequate secondary market exists. For further details of these or other bonds see the complete list of Eurobond prices published on the second Monday of each month. The following are closing prices for December 15

LS. DOLLAR			Chu	ingt de		New Zealand 8% 87	15	102%	103%	+84
TRAIGHTS	रेडवा	ood Sid Off 19674: 198	er i den	/ Week	Yield	World Benk 87e 82		102%	183	Ĭ.
etrą Life 15 88/97				4 +8%	11.86	Av. price char	OLT: OR	day B. c	in the	L + V2
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sero Benk 13 88	500			+84	12.84					C)
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que Indo Sterz 15 89	100		-81			Saz da Franca 15 88 CS	751	104V4	104%	
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tist Cal Hyd 154 02	150				12.80	O.K.B. 10V4 88 CS		191%		+57
page 147s 87	750 115			* +846 * +846		Duebec Hydre 14 92 CS	501	1001		+84
raffer Wheat 11 Vs 90	50	97% 88				Link Odetec 16% 97 CS E.I.B. 12% SO Eco	171	104	184V±	
Pac Sec 14% 92	3U 15								183%	
Per Ser 15 89	75	19545 106				Autes 91/2 81 Fl	100		184%	
cars 0/S 15 84/92	100	18476 194				Nexter Midbl, SVz 87 F7	100		103%	
a Cole in 11% 89	100	185Vs 183				Hedited Gra 19 W 87 R	16		1057	
stacke Bk Fip 1474 89	300					Van Lanuthot 1014 87 Fl	50	1881/2		
Port 1144 95	150	97% 98				World Bank 10 87 Fl	100	1851		-
Post 14Vs 83 WW	500					O.K.S. 14 68 FF	400		92%	
C. 1074 88	100	9746 97				Solvey 2 Ce 14% 85 FF	200		37%	
F, 124 01	150	10136 1013			12.26	B.F.CE. 1412 81 £	. 30	Intri-	105%	+87
3. 15Vz 92	100	109% 109				8.0.P. 13V2 01 £	15	180	181	-81
portioans 1442 89	50	104% TOS				CECA 139, 88 f	20	1601/2		7
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JOHN LABATT	e
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Guaranteed Floating Rate No. due 1992, Series 78A due 1992, Series 78A

In accordance with the provisions of the Notes, notice is hereby given that the kate of Interest for the next interest Period has been fixed at 1914, per cent per annum. The Coupon Amounc of U.S.\$508 72 will payable on 17th june, 1983 against surrender of Coupon No. 2.

Manufacturers Hanover Limited Appet Bank

BASE LENDING RATES

DASE LENDI	MG KAILS
A.B.N. Bank 10 %	Hambros Bank 10 %
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Henry Ansbacher 10 %	Hill Samuel \$10 %
Arbuthnot Latham 10 %	C. Hoare & Co
Armen Trust Ltd 10 %	Hongkong & Shanghai 10 %
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Bank Hapoalim BM 10 %	Lloyds Bank 10 %
BCGI 101% Bank of Ireland 20 %	Mellinhall Limited 10 %
Bank of treland 20 %	' Edward Mankon & Co. 11 %
Bank Legmi (UK) ptc 10 %	Midland Bank 101%
Bank of Cyptus 10 % Bank Street Sec. Ltd. 101 %.	Samuel Montagu 10 %
Banque Beige Ltd 10 %	Morgan Grentell 10 %
Rangue du Rhone : 11 %	National Westminster 10 %
Banque du Rhone 11 % Barciays Bank 10 %	Norwich Gen. Tst 10 %
Beneficial Trust Ltd 10 %	P. S. Refson & Go 101%
Bremar Holdings Ltd. 11 %	Roxburghe Guarantee 101%
Brit. Bank of Mid, East 10 %	Royal Trust Co. Canada 10 %
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Cavendish Gty Tst Ltd. 101%	Trustee Savings Bank 10 %
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Clydesdale Bank 10 %	Williams & Glyn's 10 %
C. E. Coates 11 %	Wintrust Secs. Ltd 101%
Comm. Bk. of N. East 10 %	Yorkshire Bank 10 %
Consolidated Credits 10 %	Members of the Accepting Houses
	Gommittee.
	* 7-day deposits 6.5%. 1-month 6.75%. Short-term £8,000 / 12-
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Exeler Trust Ltd. 112% First Nat. Fin. Corp. 121% First Nat. Secs. Ltd. 111% Robert Fraser 111% Grindlays Bank 110% Guinness Mabon 10%

PIRELLI COMPAGNIE FRANÇAISE S.A.

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This advertisement is issued in compliance with the requirements of the Council of The Stock Exchange of the United Kingdom and the Republic of Ireland.

New Zealand Steel Development Limited

(Incorporated in New Zealand under the Companies Act 1955)

Issue of up to

U.S. \$300,000,000

Guaranteed Floating Rate Notes 1992

unconditionally and irrevocably guaranteed by

New Zealand

of which U.S. \$175,000,000 is being issued as the Initial Tranche

Issue Price of the Initial Tranche 100 per cent.

S. G. Warburg & Co. Ltd.

Development Finance Corporation of New Zealand

The 17,500 Notes of U.S. \$10,000 each constituting the above issue of the Initial Tranche of the Notes have been admitted to the Official List of The Stock Exchange of the United Kingdom and the Republic of Ireland, subject only to the issue of a temporary global note. Interest is payable semi-annually in June and December, the first such payment being due in June, 1983.

Particulars of New Zealand Steel Development Limited and of the Notes are available from Extel Statistical Services Limited and may be obtained during normal husiness hours up to and including 30th December, 1982 from:—

The following have agreed to subscribe or procure subscribers for the Initial Tranche of the Notes:-

Warner-Lambert ahead

BY OUR FINANCIAL STAFF

WARNER-LAMBERT, the New Jer-WARNER-LAMBERT, the New Jersey-based maker of pharmaceuticals, bealth care products and specific cer, said the sale would give a gain cialty foods, expects this year's of about 20 cents a share.

fourth quarter earnings to surpass last year's 52 cents a share.

for the year, the compar port net income per share.

said in Los Angeles that the quarter would include a gain from last month's sale of Entenmann's baking subsidiary to General Foods for \$315m.

For the year, the company will report net income per share of about Mr Ward S. Hagan, chairman, \$2 a share, up from last year's 12 cents.

Mr Hagan said net income for 1983 would show a "double digit

National Steel worker buy-out talks continue

By Our New York Staff

NATIONAL STEEL, the fourth largest U.S. steelmaker has said that negotiations with representatives of 10,000 workers at its Weirton, West Virginia, steel plant over a plan for an employee buy-out of the huge mill are to continue.

The company, which began oegotiating on the scheme last month, said that talks were continuing and that the negotiators believed "that agreement can be reached within the oext several weeks."

If the negotiations succeed, they could lead to the creation of the biggest employee-owned company in the U.S.

The two sides had originally hoped to reach an agreement by yesterday. The company said that its oegotiators "still believe that the sale will take place in had beeo planned. National said that after there was

an agreement io principle, it would be presented to the Weirton employees for consideration over a neriod of about three or four weeks before they were asked to vote on the terms.

National announced its plan to close the plant, one of its three steel

mills in the U.S. in March. The group reported a \$94m loss in the No price tag has emerged for the plant, although it is thought to be worth considerably less than its \$322m book value—perhaps as little

Ahlsell may double earnings

By David Brown in Stockholm AHLSELL, the Swedish wholesale has forecast that it will double earnings from SKr 55.7m (S7.5m) to SKr 109m for its 1982/83 budget year, which ends nex March 31. This corresponds to earn-ings of SKr 19.50 a sbare.

Of those earnings, SKr 19m is to come from Elektriska, the former Swedish subsidiary of AEG-Telefunken, which the company acquired last October.

Ahlsell expects to achieve its ear lier target of SKr 90m. The im provement will not be the result o new demand, but rather of cost cut ting and restructuring.
The Ahlsell board yesterday an

nounced the planned formation of a new industrial installation group combining the electrical installation companies of the former AEG subsidiary with the ventilation companies at Ahlsell

mes at Aniseil.

The company predicts total turnover, for the year will reach SKr
4bn, almost double last years with
roughly SKr 2.6bn generated by the
original Ahlsell company and the
remainder by its AEG acquisitions.

CanPac cuts annual payout

CANADIAN PACIFIC, the coun try's largest industrial holding group, is psying a final quarterly divided of 35 cents a share. This payment, the same as for the third quarter, makes a total of C31.65 (U.S.S1.33) a share for the year, compared with CSI.90 for 1981, writes our Financial Staff.

BANCO UNION C.A. (Panama Branch) US \$35,000,000

Manufacturers Hanover Limited

Bank of Tokyo International Limited

Commerzbank Aktiengesellschaft

Deutsche Bank Aktiengesellschaft

Lloyds Bank International Limited

Morgan Stanley International

Sumitomo Finance International

Scrimgeour, Kemp-Gee & Co., 20 Copthall Avenue,

London EC2R 7JS.

IBJ International Limited

16th December, 1982.

Negotiable Floating Rate
U.S. Dollar Certificate of Deposit due 1987 For the six months

16th December, 1982 to 16th June, 1983 In accordance with the provisions of the Certificates, notice is hereby given that the rate of interest has been fixed at 10% per cent, per annum, and that the interest payable on the relevant interest ment date, 16th June, 1983 against each Certificate will be U.S. \$25,435,76.

Agent Bank Wells Fargo Limited





Amro International Limited

Morgan Guaranty Ltd

Bank of New Zealand

Orion Royal Bank Limited

Citicorp International Bank Limited

Credit Suisse First Boston Limited

Goldman Sachs International Corp.

Kidder, Peabody International Limited

Rowe & Pitman,

City-Gate House,

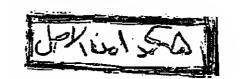
39-45 Finsbury Square, London EC2A IJA.

U.S. \$80,000,000 Floating Rate Notes 1991 Notice is hereby given

pursuant to the Terms and Conditions of the Notes that for the three months from 16th December, 1982 to 16th March, 1983 the Notes will earry an interest rate of 93% per annum. On 16th March, 1983 interest of U.S. \$24.38 will be due per U.S. \$1,000 Note and U.S. \$243.75 due per U.S. \$10,000 Note for Coupon No. 15.

European Sanking Company Limited (Agent Sank)

16th December, 1982



rp setback

BONG SERVICE

(a)

and Markets INTL. COMPANIES & FINANCE

APM buys **Continental** stake in **Containers**

AUSTRALIAN Paper Manufacturers, the diversified paper, packaging and timber group, has bought out the 20 per cent minority interest in its Containers packaging subsidiary held by the Continental Group of the U.S.

No price was revealed for the stake, although APM's 1981 hid for Containers valued the one-fifth stake at about A\$35m (US\$33.8m). After the 1981 bid Continental's holding in Containers was reduced from 28 per cent to the current level.

APM recently raised A\$52m through a rights issue, with most of the cash earmarked for its A\$160m paper expan-

sion project. Containers has been a solld Containers has been a solld performer for APM, contributing almost A316m of total carnings of A366.75m in the year to June 30 last.

Technical links between Continental and the Australian can and plastic bottle making group will be retained.

interim profit at Toshiba BY YOKO SHIBATA IN TOKYO TOSHIBA Corporation, Japan's 23.6 per cent of total turnover.

ended September 1982. Consolidated half year sales

were Y1.185bn, a rise of only 1 per cent compared with the previous fiscal year. Consolidated per share profits were Y7.49, against Y9.86. Consolidated per share profits were also Y2.5 lower than those

of the parent company alone. Sluggish sales were attribu-Sluggish sales were attributed to sethacks in home electrical appliances (down 1 per
cent to Y351hn) and heavyduty electrical apparatus (down
1 per cent to Y357.4hn). Sales
of communications and electronic components, however,
surged by 14 per cent to
Y337.9bm with sales of office
automation equipment and
semiconductors particularly
buoyant.

Overseas sales of home electrical appliances remained at the previous year's level (Y280.7bn), accounting for

second largest integrated electrical machinery group with 33 consolidated subsidiaries, reports consolidated profits down by 16 per cent to VRS.5m taleyear ended September 1982.

2.5 per cent of total turnover.

Earnings setbacks were largely attributed to the deterioration of consolidated subsidiaries. Among overseas sales subsidiaries. Among overseas sales subsidiaries, the performance of those in Brazil and Argentina were aggravated by the substantial were aggravated by the suspension of shipment dur- in Panama. ing the Latin American financial

Sharp fall in consolidated

Of Toshiba's domestic subsidiaries, Toshiba Home Electric Sales, Toshiba Ampex, Toshiba Kokan and Toshiba Jutaku Sangyo incurred losses. Earnings from consolidated subsidiaries declined by 2 per cent compared with the previous

In the current half-year end-ing March 1983, Toshiba expects continued favourable sales of continued favourable sales of electronic components. But total half-year sales are expected to stay at the first-half level. For the current full year end-ing March 1983, consolidated net profits are projected at Y37.5bn down 15 per cent on

last year, on expected sales of Y2.400hn, up 2 per cent. Toshiba has said that it plans gradual and partial with-

drawal from Latin America, because of the worsening finan-

cial situation there.
As a first step in this process it will run down two of its wholly-owned sales subsidiaries. Toshiba Argentina in Buenos Aires and Toshiba de Panama

Other subsidiaries on the list for a possible rundown are Toshlba de Chile, Toshlba Medical do Brazil, and T. and S. Servicos Industria. Tokyo Electron, listed on the second section of the Tokyo Stock Exchange, was the first Japanese company to have its

share split one-for-two on Tuesday, under a new commer-Tuesday, under a new commercial law enacted in October.

The spllt, effective for shareholders registered on December 14, is designed to reduce the high share price and to revitalise trading in the shares.

Gakken Company, a pub-llsher, sald it planned to split its sbares two-for-three Februsry, and Seven Eleven Company, a retail chain, said it proposed a one-for-two split in

NATIONAL BANK **OF EGYPT** Licensed Deposit Taker

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2 Honey Lane, London EC2V 8BT Telephone: 01-726 4237/8/9. Telex: 894735/6.



Moët-Hennessy

At its meeting of 25th November 1982 the Board of Directors of Moet Hennessy recorded final completion of the two transactions already approved, namely:

 Purchase of 34% of the shares of S.A. Georges
 Delbard and S.C.A. Des Pepinieres Et Roseraies
 Georges Delbard. Georges Delbard.

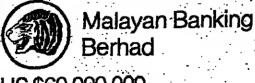
Acquisition through its subsidiary Moef Hennessy US Corporation of 100% of the shares of the Californian company, Armstrong Nurseries Inc., the world's second largest rose grower.

By these transactions, Moet Hennessy has gained a. foothold in a new sector, where its objective is to pirk into practice the Delbard Group's technological know-how in "in vitro" vegetative cultivation of roses in the largest consumer market, the USA. Supported by the power of the trading network at Armstrong's disposal, the Group should become a world leader.

Simultaneously, Moet Hennessy is strengthening its position in the USA, where it already has several subsidiaries, the consolidated turn-over of which has already reached 200 million dollars.

In order to consolidate the Group's financial situation. the requirements of which are connected (1) to the two transactions above and (2) to the exceptional champagne vintage, the Board decided on the principle of increasing capital against cash (1 for 8) to be made at the beginning of 1983.

The Board also approved distribution of an Interim Dividand of FES net (against FE7 in February 1982) which will be paid on 10th Januery 1983 against coupon



US \$60,000,000

Certificate.

Negotiable Floating Rate Dollar Certificates of Deposit due 1987 Tranche A

In accordance with the provisions of the Certificates, notice is hereby given that the rate of interest for the period from 17th December 1982 to 17th March 1983 has been established at 93/4 per cent per annum. The interest payment date will be 17th March 1983. Payment which will amount to US \$6,093.75 per Certificate, will be made against the relative

Bank of America International Limited

Breathing space granted to Harvester Australia

BY OUR SYDNEY CORRESPONDENT

APPLICATIONS for winding-up orders against International Harvester Australia's manufac-Harvester Australia's maintac-turing arm and International Harvester Credit Corporation have been set aside until April 7 by the Supreme Court of

Adjournment of the hearings allows a lending agreement to be concluded for the nearly 30 reditors of the troubled group. The court's approval was required in order to avoid the liquidation of Harvester following the winding up petitions.
The decks are now clear for

the decks are now clear for the International Harvester Australia group to work out a scheme to allow it to trade itself out of its difficulties, although its level of operations will have to be reduced. The group, its receivers, lenders, employees and the Victorian State Government will now work towards a full-scale reconstruction scheme which will see it shed about 1,000 of

facture and scales down truck making. The applications for the wind-ing-up orders against Harvester formed part of the long-run-

of agricultural equipment manu

ning negotiations among lenders, and the adjournment was s formality following the execu-tion of the loan pact by all lenders yesterday. In essence, the pact will se

four lenders — Lloyds Inter-national, Partnership Pacific, Wardleys Australia and Euro-Pacific Finance—transfer a A\$13.5m (U\$\$13m) exposure to the manufacturing arm from the more financially sound credit more financially sound credit

At the same time A\$10,12m will be made available from a total of A\$25m of credit line extended to Harvester but as yet not drawn on. The funds from the undrawn lines will be held in escrow until a court sancits 2,500 workers as it pulls out is in place.

Half-year earnings down at World International

BY ROBERT COTTRELL IN HONG KONG

WORLD INTERNATIONAL showed attributable profits of (Holdings), the shipping group controlled by interests of Sir Y. K. Pao, has reported attributable interim profits almost one-third down in the six months to September.

showed attributable profits of HK\$416.4m.

The interim dividend is maintained at 4.5 cents. The board said at last year-end that it expects at least to maintain dividends for the full year at 12 cents.

After tax profits of HK\$235.8m (U.S.\$36.4m) compare with a 1981 interim figure of HK\$215m. This year, however, there is an extraordinary debit of HK\$1.3m, against an extraordinary gain of HK\$1.25.9m in last year's first half.

Aftributable profits

Basic interim earnings per share are up from 15.9 to 16.7 cents. However, when outstand-ing deferred shares are taken into account the figure falls

from 15.6 cents last interim to 14.9 cents this year.

Apart from its shipping in-terests, World bolds 45 per cent of Hongkong and Kowloon HK\$234.5m this year compared Wharf, the property group with HK\$340.9m. In its last full which was the subject of an year to March 1932, World abortive merger last year.

Sappi to maintain payout

SAPPI. THE South African paper and packaging manufacturer, is projecting its earnings fell to 93.7 cents from 97.2 a year earlier, on slightly higher issued capital.

The shareholders approved Sappi's proposed R150m rights issue which is being raised to finance the R800m expansion of the company's Ngodwana pulp and paper mill.

Me Tourist balf earnings per share fell to 93.7 cents from 97.2 a year earlier, on slightly higher issued capital.

The shareholders approved Sappi's proposed R150m rights issue which is being raised to finance the R800m expansion of the company's Ngodwana pulp and paper mill.

ing, with a recovery in demand for group products not meeting expectations. Increased demand the plant and indications were materialised only near the end of the year and earnings will be similar to the first half.

Mr Landau said construction was proceeding on schedule at the plant and indications were that the project would be completed on tima and within budsimilar to the first half.

This Advertisement compiles with the requirements of the Council of The Stock Exchange

ASESORES DE FINANZAS, S.A. DE C.V. (Organised under the laws of the United Mexican States)

SHORT TERM NOTES ISSUED IN SERIES UNDER A U.S.\$300,000,000 NOTE PURCHASE FACILITY AGREEMENT

GUARANTEED BY CITIBANK N.A. Issue Price 100 per cent

Citicorp International Bank S.A. has agreed to subscribe or procure subscribers for the Notes as provided in the Note Purchase Facility

The Notes in the denominations of U.S.\$10,000 and U.S.\$500,000 each will be issued in Series of between U.S.S.S.000,000 and U.S.S.S.000,000. Application has been made for the Notes to be admitted to the Official List of The Stock Exchange of the United Kingdom end the Republic of Ireland, subject only to the issue of

Notice is hereby given that the U.S.550,000,000 Series 10 issued

Notice is hereby given that the Unabulous Series to issue under the Note Purchase Facility Agreement will carry an interest rate of 1076% per annum and the Mazurity Date of the Series will be 16 March, 1983.

Particulars of the Notes and of Asesores de Finanzas, S.A. de C.V. and Citibank, N.A. are available in the statistical services of Extel Statistical Services and may be obtained during normal business hours on any week day (Saturdays and public holidays excepted) up to and including 31 December, 1982 from:

Cazenove & Co. 12 Tokenhouse Yard London EC2R 7AN

16 December, 1982.

This announcement appears as a matter of record only



OKG Aktiebolag

U.S. \$100,000,000 **Multi-currency Term Loan**

Laad Managed by:

Enskilda Securities

Hambros Bank Limited

Provided by: **Hambros Bank Limited**

The Industrial Bank of Japan, Limited

Morgan Guaranty Trust Company of New York

Gulf International Bank B.S.C.

Orion Royai Bank Limited

National Westminster Bank Group

Skandinaviska Enskiida Banken The Sumitomo Trust & Banking Co., Ltd.

Svenska Handelsbanken Group

Westilb International S.A.

Agent Bank: Skandinaviska Enskilda Banken

November 1982

Société Générale

Occidental Petroleum Corporation

has acquired

Cities Service Company

We initiated this transaction and acted as financial advisor to Occidental Petroleum Corporation.

Goldman, Sachs & Co.

New York Boston Chicago Dallas Detroit Houslon Los Angeles Memphis Miami Philadelphia St. Louis San Francisco London Tokyo Zurich

December 7, 1982



THE LONG-TERM CREDIT BANK OF JAPAN FINANCE N.V.

U.S.\$75,000,000 Floating Rate Notes due 1986

For the six months 15th December 1982 to 15th June 1983 the Notes will carry an interest rate of 10%% per ennum with a coupon amount of U.S. \$262,26.

> Bankers Trust Company, London Agent Bank

Weekly net asset value

Tokyo Pacific Holdings (Seaboard) N.V. on 13th December 1982, U.S.\$59.89

Listed on the Amsterdem Stock Exchange

information: Pierson, Heldring & Pierson N.V., Herengracht 214, 1016 BS Amsterdam

VONTOBEL EUROBONDINDIZES

WEIGHTED AVERAGE YIELDS PER DECEMBER 14 1982

	Today	INDEX Last week	Year's High	Yeer's Low
'\$\$ Eurobonds	12.60	12 41	15 62	12.41
M (toreign Bond (45464)	7 73	8.14	9 75	7.73
FL (Buarer Notes)	8.18	8.56	10 68	B.1a
ans Eurobonds	13.70	13.94	17.47	13.70
, J. Vontobel & Co.	. Bankers,	Zurich - Tel: 0	7-488 7111	

Cable and Wireless £22m midway boost

a currency gain of 15m, due to increase.
current sterling exchange rales. The te They also included doubted proness in the U.S. is producing fits of £8m (£4m) from associates, profits significantly above the including restructured com-nanies in Bahrain and Hong

ing improved margins has helped current economic conditions. to the continued improvement in trading results.

Pre-tax profits were struck after a jump in investment and leasing profits from £4 to £13m. The net interim dividend has been lifted front an equivalent 2.6p to 3.2p after earnings per 50p share were shown as up

level of the comparative period tast year, say the directors. The The directors also point nut that sustained progress in achievement of the directors also point nut that sustained progress in achievement of the directors also point nut at a slower rate, reflecting The increased attention given

to the management of cash is benefiting results, they say, and as investment is made in new business opportunities, interest income will be replaced progressively by trading profits. Future investment income will

some changes bave taken place which affect comparativa figures. In the year to March 3t 1982 companies were incorporated in Bahrain and Hong Kong, and, since July 1 1981, Bahrain became an associate. Hong Kong was a branch until September 30 1981 when it become a september 30 1982 when it become 30 1982 when it bec 1981 when it became an 80 per cent owned subsidiary. Trading profits include profits of £8m from associate companies managed by the group.
In their statement last July

the directors explained that cash resources had increased from the proceeds of asset and share sales in Bahrain and Hong Kong and that substantial funds would be required for tax payments due on January 1 1983.

A SURGE of £22m in pre-tax profits has been shown by Cable of the interim dividend was and Wireless to £67m for the six months to September 30 1982. Turnover of this supplier of telescommunication services and factlities, almost entirety overseas, was £15m ahead at £193m.

At the trading level profits improved by £13m to £52, which the directors say, was boosted by the director DIVIDENDS ANNOUNCED Date Corre- Total Total of sponding for last payment payment Construction Hidgs. 7.35
T. Cowle 1.2 March 3 0.8 2 1.6
Equity & Law Life int. 5 Feb. 3 4.5 15
Feedback int. 1 Feb. 24 1 2
Globe Tst. Int. 3.55 Feb. 25 3.55 7.9
McCarthy and Stone 4t Feb. 26 2 23
Palerson Jenks int 0.7 0.63 233
Redfearn Nil Glass 5.23 Feb. 18 5.28 8.28 8.28
Alex, Russelt int 0.65 Jan. 28 0.54 15
Rbt. Kitchen Taylor 8 March 3 7 11 10
Tex Abrasives int. 0.75 0.75 3.25
Dividend's shown pence per abare net except where otherwise stated
"Equivalent after allowing for scrip issue, for capital increased by rights and/or acquisition issues, tUSM stock & Included second interim of 2.64p and Gnal of 6.72p. (Split as to Government (£3.5m) and second interim of 1.3p. March 3 0.8 Feb. 3 4.5

Tax for the six months eble profits emerged higher at amounted to £24m (£20m). After £37m against £24m. minorities of £6m (£1m) attribut-

McCarthy and Stone in line with forecast

With a rise in taxable profits With a rise in taxable profits from £1.4m to £2.1fm in the year to Angust 31 1982 McCarthy and Stone—the property development company which specialises in housing for the elderly—is in line with its forecast at the time of its placing on the Untisted Securities Market last June of pre-tax profits in excess of £2m.

The year's dividend is set at 4p net per 20p share which is covered by stated earnings per share of 17.4p (11.fipt.

Mr John McCarthy, chairman, says the current year has started well with sheltered unit sales for the first three months totalling 85.

Turnover rose from £4.53m to £5.98m, with sales of shellered units amounting to 230 units. Tax took £820,000 (£525,000) leaving attributable profits of £1.34m (£873,000). After dividends of £53,000 (nilt the retained balance emerged at £1.28m (£873,000).

Suspended

Shares in the fur and leather group. B Paradise, were suspended yesterday at 9p in the aftermath of the appointment of settle down to be one of the most solid performers. It has a six year lead on applying and enhancing its proven formula for providing accommodalion in one of the most recession proof sectors of the market with a rapidly growing over 60s populstion. By adopting standardised units it is able to achieve high construction efficiencies. This combined with a policy of unit carrying a land bank that requires funding, it is attaining gross margins around 30 per cent. On top of this it is building up a useful contribution from estate management. However while it continues to fund expansion from was appointed yesterday at 9p in the aftermath of the appointment of receivers to the group's close associate, R. and J. Pullman.
Pullman holds a 31 per cent stake in Paradise and the heavily qualified accounts published by olisting of £1.75m. At the suspension price, Paradise is valued at just over £450,000.

Midland Bank, the principal tender to Pullman appointed receivers and managers from Price Waterhouse on Tuesday to the narent company and its manufacturing subsidiaries. Another accountant, Thoroton Banker, was appointed yesterday at 9p in the aftermath of the appointment of receivers to the group's close associate, R. and J. Pullman.

Pullman holds a 31 per cent stake in Paradise and the heavily qualified accounts published by olisting the principal stake in Paradise, were suspended yesterday at 9p in the aftermath of the appointment of receivers to the group's close associate, R. and J. Pullman.

Pullman holds a 31 per cent stake in Paradise, were suspended yesterday at 9p in the aftermath of the appointment of receivers to the group's close associate, R. and J. Pullman.

Pullman for the year to April 30 iast show thet it bad guaranteed paradise's borrowing facilities to a citing of £1.75m. At the suspension price, Paradise's borrowing facilities to a citing of £1.75m. At the suspension price, continues to fund expansion from cash flow growth cannot be spec-tacular and there are also physical restraints of finding sultable sites. A move to widen sits developments into the north of the country will mean this will not be a prohlem in the short term nor does it require it to accept lower margins on units in areas where the working population of the financial further details of the financial working at Paradise, based like Pullman in the east end of Loudon. Is expected within the next 10 days.

It is not yet clear whether paradise can substitute the bank Pullman. tion is less affluent. Further good progress is indicated for the current year and its alm to have approachlog 1,500 units under construction by year end, points to a high 6ow of completions for the following two years. The shares, which had more than trebled since tha placing at 137p in June this year. yesterday slipped 20p to 370 bringing the fully taxed historic p/e a shade closer to reality at 29.

T. Cowie advances: further progress seen

was appointed yesterday by the

Royal Bank of Scotland to act as receiver to many of Pullman's

Paradise can substitute the bank guarantees provided by Pullman, ahould this be required, or the

Because of adverse trading, the directors have not been able

to recommend payment of the 6 per cent cumulative preference dividend for the balf-year to December 31 1982.

extent of trade debts

Heal and Son

retait interests.

SECOND HALF results of T. 191.19m to 193.26m. Interest Cowie continued the progress charges amounted to 11.77m made in the two preceding six (193m), tax took 1175,000 month periods and enabled the (1160,000) and minorities amounted to 11.77m pre-tax profits of 11.01m for the year to end-September last, compared with 1334,000 the previous year. Having regard to the economic climate the directors regard the performance as satisfactory and with prospectively lower interest rates they look forward to a further improvement in the current year.

Earnings per 5p ahare on a net basis emerged at 5.34p 10.1p losst for the year under review and an increased final dividend of 1.2p (0.8p) raises the net total to 2p, against 1.6p.

Turoover moved ahead from the 193.26m. Interest continued to 11.77m that they form the first half of results generally produce better returns.

In their interim report the directors were confident of a significantly better annual result provided interest rates did not move the economic outlook did not worsen.

A divisional breakdown of pre-tax profits shows: motor trade of 1330,000 (2253,000 loss), fire, such that it is the profits of the economic outlook did not worsen.

Comment

1.**Comment

1.**Shardly time for rejoicing but in the halance sheet is still only the profits of 11.000 at the half-way stare of 253,000 (253,000 (253,000 loss), and finance for the grain and miscellaneous expenses and the finance side is profits of the tire interim report the directors.

Comment

1.**Shardly time for rejoicing but in the halance sheet is still to the economic outlook did not worsen.

Comment

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Comment

1.**The propriet re

Paradise Brasway nears break-even dealings suspended

A DIFFICULT first six months as predicted at the AGM left Brasway, an iron and steel scrap processor and tube and bright har manufacturer, with pre-lax profits at an almost break-even £3.495, compared with £361.225 previously.

The figures included a £59,000 profit from the disposal of the Cardiff Docks operation.

Turnover for the period, covering the 26 weeks to October 31 1932, fell from £11.57m to £3.34m.

Mr R A Swaby, the chairman, describes the results as "disappointing" hut adds that "things are how taking a turn for the better and the company can look forward with more confidence."

Although thera may be a few 222p was paid previously. Stated earnings per 10p sbare dropped from 6.39p to 0.08p. There was improving trend, the chairman better confident in predicting a much better and the company will turn in some "quite exceptional results."

Although thera may be a few 222p was paid previously. Stated earnings per 10p sbare dropped from 6.39p to 0.08p. There was improving trend, the chairman better balf of the cardings per 10p sbare dropped year which could npset the cardings per 10p sbare dropped year improving trend, the chairman broad trends in predicting a much better confident in predicting a much better on flow in predicting a much better second half and certainly "an division bas had a difficult time lately was command.

Mr Swaby says the bright har division bas had a difficult time lately was commence in predicting a much better in predicting a much better second half and certainly "an division bas had a difficult time lately was commence in predicting a much better second half and certainly "an division bas had a difficult time lately was commence in predicting a much better bath of the company will turn in some state between the levels of last

IC nave each issued 20.5m of 101 per cent bonds at par for redemption on June 13 1984. Braintree DC has issued 20.25m in three year bonds carrying a coupon of 111 per cent for redemption on Decem-ber 11 1985.

Yearlings total £15.25m

Yearting bonds totalling Forest DC f0.75m; Setton Metro f15.25m at 104 per cent redeem-politan BC f1m; South Yorkshire £15.25m at 10½ per cent redeemable on December 21 1983 bave been issued this week by the following tocal authorities.

Alnwick District Councit £0.5m; Bassetlaw DC £0.5m; Braintree DC £0.25m; Isle of Wight County Councit £0.5m; East Cambridgeshire DC £0.25m; East Cambridgeshire DC £0.25m;
Rochdale Metropolitan Borough
Council fim; South Oxfordshire
DC £0.25m; Taunton Deane BC
£0.5m; West Lancashire DC
£0.25m; Birmingbam I City of]
DC £2m; Birmingbam I City of]
DC £2m; Brighton BC £1m;
Chesterfield (Borough of)
£0.75m; Walsall Metropolitan BC
£1m; Hillingdon (London
Borough of) £1m; Brentwood DC
£0.25m; Kensington & Cheisea
(Royal Borough of) £1.25m; New

Downs Surgical losses more

Forest DC 10.75m; Sefton Metropolitan BC 11m; South Yorkshire CC 50.5m; Toubridge and Maling DC 50.5m; East Devon DC 10.5m; Ellesmere Port and Neston (Borough of) 10.5m; Northampton BC 10.5m.

A total of 50.75m of 117 per cent bonds at par redeemable on December 9 1987 have been issued by Ettrick & Lauderdala DC 10.5m, Castle Point DC 10.25m.

Langbaurgh BC and Dartford DC have each issued \$0.5m of 10.5m of 10.5m on June 13 1884.

hnt this was wiped out by net interest charges up from £204,000 to £314,000.

Tax charge was £13,000, against £30,000, making a net loss in £264,000, compared with £169,000. There was also an extraordinary debit of £108,000 [£41,000 credit) being redundency and compensation payments.

ments.
Sisted loss per 10p share increased from 1.13p to 1.74p, excluding exchange credits of £38,000 (£270,000). Comparatives have been adjusted. The company's activities in-clude the manufacture and supply of surgical instruments and appliances and other hospital

Carr's Milling lifts payment

Following an increase from 1480,000 to 5578,000 at balf-way, pre-tax profits of flour miller, animal feedstuff manufacturer, Carr s milling industries, finished Carry-Milling industries, finished the 53 weeks in September 4 1982 ahead at 1991,680, compared with a previous 1749,732. Sales advanced from 134.77m to 139.31m for the period. Current trading is satisfactory and directors are lifting the final dividend to 3.5p (3p) net per 185 above heaving the stall hay. 25p share, boosting the total pay-ment by 1p to 5.25p.

Tax charge for the 53 weeks totalled £283,210 (£138,481)

> PKbanken -US\$50,000,000 Subordinated Floating Rate Notes Due 1991

For the six months, December 17, 1982 to 17 June 1983 the interest rate has been fixed at 10% per annum. Interest payable on June 17, 1983, will be US\$505-56 per note of US\$10,000 denomination:

PK Christiania Bank (UK) Ltd. Agent Bank

LADBROKE INDEX 582-587 (-11)

Caravans Intnl. £3m loss: bank aid sought

By Mary Ann Sieghart

TROUBLED caravan manufac TROUBLED caravan magnifec-turer, Caravans Intermeteral, announced record pre-tax-losses of £3.15m yesterday, together with a proposed deal, with hankers to improve liquidity, Borrowings currently stand at 200 per cent of shareholders' funds.

The loss incurred was more than double the £1.48m deacht for the year to August 31.148ff. Sales were down from £68.6m; to £46.7m.

African countries contributed nothing at the trading lavel, compared with a profit of £1.93m tast year, and European countries showed a loss of £1.35m (£1.49m), interest payable was slightly down at £1.82m (£1.92m). The dividend is again being passed.

Commenting on the talks with Commenting on the talks with bankers, finance director Mr Patrick Bell, said: "Our aim is to secure adequate working capitat for the coming year. We would hope to be able to announce some arrangement at the forth-coming AGM."

coming AGM."
There was a lax credit of £33,000 (charge of £839,000), making an attributable loss of £2,94m (£3,23mt. This included minorities credits of £5,000 (debits of £587,000) and extraordinary credits on property disposals of £179,000 (debits of £547,000) £547,000). . -

The increase in sterling book value of overseas net assets arising from exchange rate translations was £104,000 (decrease of £213,000).

The loss per share before extraordinary items was 36.81p (31.78p). Directors will be bringing to the credit of reserves 10.5m, being the surplus arising on property revaluation. comment

Things could hardly be worse et Caravans International Pre-tax Things could hardly be worse et Caravans International. Pre-tax losses have more than doubled from the disastrous levels of last year and the company has a serious liquidity problem, with capital gearing at 200 per cent. All hapes are pinned on a ballout from CGs bankers, which would give it enough warking capital to last out for one more year at least. Now that CI has sold off its South African subsidiary, it has no profit-making countries left to trade in; unless, that is, demand picks up substantially. At the moment, dealers are destocking as much as possible, which means that sales are down by 36 per cent—though part of the flectense can be attributed in the loss of the South African company. The company admits that it rationalised too little and too late and that it is geared to sell much more than it can. But ft also more than it can. But ft also believes that in motor and specialist caravans, there is scope for an increase in market share through better selling techniques. Meanwhile, profits seem far away, as the market recognises; the shares fell 5p on the day to close at 12p—8p less than their par vslue—capitalising the company at only just over film.

British Tar down

Lower pre-tax profits of £343,000 were returned by British Tar Products for the half year ended September 30 1982 com-pared with £535,000 previously. Turnover, however, moved ahead slightly from £12,56m to £13,91m. Earnings per 10p share fell to 1.31p (2.24p) basic and to 1.24p (2.13p) diluted but the net interim dividend is held at 0.325p—a final of 1.675p was: paid for the 1981-82 year from taxable profits of \$1.04m (2707.000). Net profits for the first half of the current year emerged £185,000 lower et £250,000 after tax of £82,000, against £90,000, and minorities of £1,000 (MH). The group's interests are in bulk storage, chemical manufac-ture and merchanting.

Arlen rights: plans disposal

BY RAYMOND SNODDY

Arien Electrical, the Slough-based manufacturer of electrical and lighting accessories, plans to dispose of a loss-making sub-sidiary and make a \$500,000 rights issue.

The company is to sell Englon Plastics of Tonbridge, which specialises in thermoplastic moulding for the electronics and totecommunications industry to

telecommunications industry to. three directors. The restructuring plan, which

will go before an extraordinary general meeting of Arien on January 7 came as the company

general meeting of Arien on Tamenson and Evershed RFO. Sisses and Japunary 7. came as the company.

Simbounced its group results for the year to June 30 1982.

These show a pre-tax loss of \$202.800 compared with \$590,900 is 1981 on a turnover which generally from \$7.26m in \$8.7m.

The group says its financial positis has deteriorated significantificant in the past two years with \$100 on contributing in this cantificant toss of \$201,000 in 1987.

Arien considered closing Englon life has instead decided to sell life share capital for \$1 to Mr Barry Baylis, financial director, and it Noville Tester, technical director.

Arien will subscribe for \$1 to Mr Barry Baylis, financial director, and it Noville Tester, technical director.

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Arien will subscribe for \$1 to Mr Barry Baylis, financial director, and it Noville Tester.

G.M. Firth (Hindings), steel stockist and merchant, headed to subscribe to a maximum of \$24.28 to \$1 to \$20 to

BOARD MEETINGS

This advertisement is issued in compliance with the requirement of the Council of The Stock Exchange

LONDON SHOP PROPERTY TRUST plc (Incorporated with limited liability in England No. 216214)

£10,000,000 12.5 per cent. Einst Mortgage Debenture Stock 2015/20 et £99-850 per cent.

psymble as to £25 per cent. on 20th December, 1982 and as to the believe by 31st May, 1983

Application has been made to the Council of The Stock Exchange for the whole of the above Stock to be admitted to the Official List. In accordance with the requirements of the Council of The Stock Exchange, \$1,000,000 of the Stock is available in the market until 10.00 a.m. on, 17th December, 1982.

Packetulers of the Stock will be circulated in the Edel Statistical Services and copies may be obtained during normal business hours on any weekday (exchaling Saturdays and public holidays) up m and including Stat December, 1982 from:

J. Henry Schröder Wagg & Co. Limited W. Greenwell & Co. 120 Cheapside.

16th December, 1982

London EC4M 9EL

M. J. H. Nightingale & Co. Limited

Telephone 01-621 1212 Prices now available on Prestal page 48146.

Redfearn National Glass

PRELIMINARY AKKOUNCEMENT

53 weeks ended 3 October 1982 52 weeks £'000 £'000 Sales 66,088 61,688 Trading Profit 2,932 238 Redundancy Costs 1,064 418 1,292 Interest payable (net) 1,310 Profit/(Loss) before tax 576 (1,490)8.28p 8,28p Dividend per ordinary share Earnings per ordinary share

Mr. John Pratt, Chairman, reports: ::

Profit before tax amounting to £576,000 compares with a loss of £1.49m for the previous year. This represents a significant and welcome improvement in another difficult trading year. Sales for the year totalled £66.1m, £4.4m better than the 1981 figure. Industry

sales for glass containers declined by a small percentage although it should be noted that the depressed state of our markets was mirrored by the situation in Europe as a whole The redundancy programme was accomplished with no disruption to produc-

tion and a concentrated effort to improve production efficiency has been implemented together with a management reorganization at both plants.

Capital expenditure in the year totalled £5.65m and there has been no material

change in our cash position. Looking ahead to 1983 trading conditions will continue to be uncertain with trends of volume and price being impredictable. In general we expect the trading

pattern during the year to follow that of previous years. Our drive to secure further increases in productivity will continue next year but the better profitability which should be the outcome must in turn depend on a more stable pricing structure than is the case at the present time. The 1982 result has been a useful step forward in the return towards a reasonable margin of profit.

The Annual Report will be posted to shareholders on 18 January 1983 and the Annual Game Meeting will be held at the Royal Station Hotel, York at 12 noon on Thursday 17 February 1983.

REDFEARN NATIONAL GLASS, FISHERGATE, YORK, YO! 4AD.

KWIK SAVE

TEN YEARS OF NON-STOP GROWTH

1982 £23,620,000

Trading results
Group turnover increased by 21.7% from £403.8m in 1981 to £491.3m in the year just ended, while group net profit before laxation amounted to £23.6m compared with £19.3m in 1981, an increase of 22.1%. Nel margins remained sleady during the year, while the supply position and stock ratios have also been stable.

With the assistance of the investment of the rights issue monies, net interest received has increased from £841,000 in the previous year to

Concessionaire and other rentals rose by 23% from £3,689,000 to £4,539,000 and again made an important contribution to group profits. Our wholly owned subsidiary, Coleman Meat Company Limited, had a very good year and made a significant increase in its contribution to profits.

An interim dividend of 2.0p per share on the ordinary share capital as increased by the rights issue was paid on 1st July, 1982. The Board now propose

1981 19.341m :1980 14.404m 12.186m

9.916m

8.610m

a final dividend of 4.0p per share payable on 14th January, 1983 to shareholders on the register at the close of business on 15th December, 1982. This makes a total of a 6.0p per share on the increased capital compared with 5.0p per share in the previous year.

At the year end, we were operating to 306 stores, having opened 32 and closed 3 stores during the year. The new store openings have been in our established areas. We anticipate opening in excess of 30 stores in the current year, including stores on the South Coast and in North East England, where we have not previously been represented. We have purchased a freehold property at Sherburn in Elmet, North Yorkshire, which we are developing as a distribution depot to support our longer term expansion east of the Pennines.

Future prospects

While the economic depression continues, consumer spending is restricted. Nevertheless, our policy of giving the housewife the best possible value for money by providing permanent discounts on our whole range of leading brands will, we feel sure, enable us to continue our growth.

Extracts from the Chairman's Statement

Copies of the report and accounts are available from the Company Secretery KWIK SAVE DISCOUNT GROUP PLC WARREN DRIVE, PRESTATYN, CLWYD, LL19 7HU

المكاراه المالك

ABI reaps

benefits of

changes and

The henefits of re-organisation

and investment in new tech-notogy have helped Ace Belmont International to progress during 1982, says Mr T. W. Reed, the

chairman. Pre-lax profits rose by over 12 per cent from £1.39nt to £1.56m. and this has been achieved on a reduced turoover

of £30,29m compared with £32,21m, thus reflecting the reduction in the overall market size. At the interim stage, profits dipped slightly from £481,000 to

Ace Belmont is the owner of ABI Caravans, the UK's largest caravan manufacturer.

Commenting on the year's figures, Mr Reed says: "Despute an extremely difficult year, which

saw the overall market in the UK and Europe continue to ron-

fract, we have managed to signi-

He adds that the group's 1983

product range has been "well received," both at innue and abroad, and with increased activity in the export market planned for next year, it hopes to maintain its progress.

The year's trading profits in-

creased from £1.51m to £1.6m. Interest charges were considerably lower at £40.000 against £123,000, but tax rose from £105.000 to £485,000.

investment

Companies and Markets UK COMPANY NEWS

H. P. Bulmer profits jump to £7.24m at six months

FOR the haif-year ended October pattern of interim dividends significant reduction in interest 29 1982, taxable profits of cider spirits wholesaler H. P. Bulmer companies, the directors have Holdings jumped from £3.98m to declared a single interim of 9.8p

for this period depends in large Sales amounted to £44.07m, measure on the success of Christ against £34.62m, for the six mas trading. Although there is months and trading profits were no evideoce to suggest any \$8.14m 155.32m). These were general upturn in the UK split as to cider £7.46m (£4.72m), economy, the board is confident pecun £426,000 (£350,000) and general upturn in the UK split as to cider £7.46m (£4.72m), economy, the board is confident pecul £426,000 (£350,000) and that the company's major brands wines and spirits £256,000 — these include Woodpecker. £247,0001.

The pre-tax figure was struck after interest charges, down from the continue to grow and that this will underwrite a further £962,000 to £701,000, and exceptionst debits of £700 core. will "underwrite a further improvement in group pre-lax profit during the second half."

After a tax chargn much higher at £1.91m. compared with a previous £724.000, earnings per 15m. happen at the half-ray state. After a tax charge much higher at £1.91m. compared with a previous £724.000, earnings per 25p share at the half-way stage are given as 50.74p, against 30.73p. In order to bring the

more into line with that adopted by the majority of UK listed ff 34m and directors are confident of a further improvement in second half figures.

They explain that the outlook making a total of 12.6p.

Pectin profits improved by 22 per cent, helped by the strength of the dollar but those from wines, spirits and other drinks by only 4 per cent.

Perrier continued to make progress, but trading conditions in the UK wines and spirits market remain depressed. Considerable increase in the value of wines and spirits sales arises mainly from inclusion of sales of Domeco brands for the first time, directors point out.

However, the increase in sales bas not been reflected in profits. The directors are calling for an extraordinary general meetan extraordinary general meeting early next year to consider a special resolution to sub-divide each of the authorised and Issued 25p ordinary shares into five ordinary of 5p each, in the light of the recent "significant rise" in the company's share price.

RKT rises to £1.4m: lifts payout

and property investor and dealer Rubert Kitchen Taylor ahead at £1.36m for the year to September 30 1982, against £442,000. Turoover advanced from £16.99m to £22.41m. With earnings per 10p share given higher at 14.5p (8.1p) the final dividend is being raised

from 7p to 8p making an in-creased total for the year of 11p The directors say that with reasonable order books the year ahead appears promising, and

(£130,000), Minority interests came to £64,000 (£4,000) and last tima there was an extraordinary credit of £335,000. Current cost adjustments reduced the pre-tax profits to f1.18m (£280,000).

INCREASED serond-half taxable profits of f741,000, compared with £589,000, left knilwear and property investor and dealer Rubert Kitchen Taylor ahead at £1.36m for the year to September 30 1982, against f442,000. Turoover advanced (£699,000) and tax took £707,000 profits, but its traditional activities of £598,000. Without the U.S. has been a feature of at halftime and looks set to conmanufacturing and this will continue progress, towards the £2m time. The growing property peak seen four years ago. Not only is it building up a property investment, eushion, with Chart Street alone producing annual remainded the U.S. has been a feature of at halftime and looks set to conmanufacturing and this will continue progress, towards the £2m time. The growing property only investment, eushion, with Chart Street alone producing annual remainded to the current year, they say the seen four years ago. Not only is it building up a property and the £12.300. The continue progress, towards the £2m time. The growing property investment, eushion, with Chart Street alone producing annual acturing and this will continue progress, towards the £2m time. The growing property investment eushion, with Chart Street alone producing annual acturing and this will continue progress, towards the £2m time. The growing property investment eushion, with Chart Street alone producing annual acturing and this will continue progress, towards the £2m time. The growing property investment eushion, with Chart Street alone producing annual acturing and this will continue progress, towards the £2m time. The growing property peak seen four years ago. Not only it to building up a property and the street alone producing annual acturing and this will continue progress, towards the £2m time. The growing property peak seen four years ago. Not only it to be current year, they are to be current year, they are to be current year, they are to be current year. The growing progress towards the £2m time. manufacture and knitwear manufacture and merchanting and roming back to life. Thermal underwear and sweat shirls are very much in vogue while there is strong overseas demand for its up-market knitwear. Improved cash for its hims keep horrow. cash-flow is beining keep borrowreasonable order books the year ahead appears promising, and they expect that merchanting will again do well. Expansion in tained its recovery as indicated fully taxable p/e is below 7.

comment

to pre-tax profits clearly pleased the market, the shares gaining 10p to 122p. But the company itself probably expected a better outcome than this when the year began. The trouble was that the 8 per cent price increase of a year ago stuck for a more than two months, and discounting since then has been continuous. United Glass and Rockware have tried again with the anoouncement of a price increase of about 5 per cent; Redfearn will most likely follow suit, but more in hope than expeciation. The loss from the PET division is very disappointing, but now that Redfearn is manufacturing all its own pre-forms, RN Plastics should break even this year. Import penetration is no the increase, and in particular RN Plastics should break even this year. Import penetration is on the increase, and in particular the Austrians seem to be winning RN Plastics should break even this year. Import penetration is not the increase, and in particular the Austrians seem to be winning big Schweppes contracts that used to go in English based companies. Despite absorbing over film in redundancy costs Redfearn is not letting its axe sieep in its band, with further job losses a probability. The sad truth is that, if and when demand does pick up 10 the levels seen before the recession, the industry as a whole has lost out permanently in market share to alternative forms of packaging. The maintained divided with Hudson Bay through Plateau, including Inspiration Consotitated Copper. Terra Chemical International. Some sort of fund-raising exeralternative forms of packaging.
The maintained dividend yields
10 per cent which should keep
the high inrome funds happy with
RNG.

Return to profit as Redfearn rallies

A SWING back into profit is reported by Redfeare National Glass for the 53 weeks to October 3 1982. The figures show pre-lax profits of £576,000 against losses of £1.49m in the previous year At the interim stage, this glass and plastic container manufacturer, was £624,000 in the red.
Mr John Pratt, the chairman says the year-end figures, though

depressed by redundancy payments amounting to £1.08m paid during the first half, represents a "significant and welcome" improvement in another difficult trading year.
Sales for the year totalled

Sales for the year totalled f66.1m. an increase of £4.4m on the previous year. He says industry sales for glass containers declined by a small percentage, although the depressed stale of the group's markets was mirrored by the situation in Europe as a whole.

The total dividend is unchanged at £.28n with a same again final of 5.28p net. This absorbs £510,000. Stated earnings per 25p share were \$.75p (26.89p) losses).

losses).

There was a trading profit of £2.93n1 against £238,000. Net interest payable was £1.29m (£1.31m1, and tax was up from £135,000 to £218,000, leaving attributable profits of £358.000, compared with losses of £1.83m. A total of £152,000 (£2.14m) was transferred from reserves. transferred from reserves.

Capital exnenditure during the year totalied £5.65m, but there has been no material change in

trading conditions will continue to be uncertain in 1983 with trends of volume and price being unpredictable. In general, he expects the trading nattern during the year to follow that of previmis years.

The drive to secure further increases in productivity will rozdinue next year, but the better profitability, which should be the outcome, must, in turn, depend on a more stable pricing structure than is the case at the present time, he says.

On a CCA basis, there was a pre-tax loss of £1.05m (£3.36m).

Redfearn National Glass' returns to pre-tax profits clearly pleased the market, the shares gaining 10p to 122p. But the company itself probably expected a better outcome than this when the year began. The trouble was that the 8 per cent price increase of a year ago stuck

copper operations, may also be involved. RESULTS AND ACCOUNTS IN BRIEF

RESULTS AND ACCOUNTS IN BRIEF

REPATALL BEARD (HILDINGS)
Insurance broker)—For year to
September 30 1982. Turnover (759.00)
(2240,000): profiler profits (259.00)
(2240,000): profiler profits (259.00)
(2240,000): carriago eer 100 shate
2 Sp (2 3p). Directors profile to profile transferred to reserves (192.000)
(2119,000): carriago eer 100 shate
2 Sp (2 3p). Directors profile to profile transferred to reserves (192.000)
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(2119,000): carriago eer 100 shate
2 Sp (2 3p). Directors profile to profile transferred to reserves (192.000)
(2119,000): carriago eer 100 shate
2 Sp (2 3p). Directors profile to profile transferred forward sere insufficient to cover share premium secount.
PROPERTY HOLDING & INVESTMENT
TRUST—Indusm 1.450 [1 35p) for sea
months to September 30 1882, Board
expects to recommend a total dividend for the year of 3 8p). Sp (3 5p). Not income from properties (2.037.000)
(2.9.707,000): profiles (2.031)
ARCHIMEDES INVESTMENT TRUST—For year to October 31 1982: second interim dividend 4.7p net (4 3p)
making 8.8p (7.561: gross revonue (2.037.000)
(23.700): profiles (2.031)
(24.2011: net siteled earnings per shree (2.037.000)
(25.200): profile (2.000)
(25.200):

106.00) (1142,000) for six months to Septembor 30 1982, profit 15,600 (13.700); no tax.

FULCHUM INVESTMENT TRUST—Results for year ended October 31, 1982, already known. Investments 13.7m (11.1m). Current sessits 139,200 (15.02,004). Current labilities 131.692 (176.3361. Shoreholders' lunds (1.32m (11.13m). Meeting, Harrogete, January 7, 12.30 pm.

MID KENT WATER COMPANY—Results for the year to September 30, 1982, already known. Current setted 16.54m (18.45m). Including cash exbank, in hand and short-tarm deposits 22.41m (12.58m). Current labilities 12.55m (12.57m). Decrease is working capital 165,000 (12.8500). Meeting: Snodlend, Kent, Oscamber 30, 1982, noon.

WADE POTTERIES—Results for the

Snodlend, Kent, Oscamber 30, 1982, noon, while potterness Results for the year to Saptember 30, 1982, reported en November 18. Shereholders lunder 4.38m (24.54m); fixed assets \$2.25m (22.36m); current ossets \$2.55m (25.36m); current liabilities \$2.16m (25.61m); current liabilities \$2.16m (25.01m); decrease in net liquid funds \$2.41.244 (2527.526 increase). Meding \$2.41.244 (2527.526 increase). Meding \$2.41.244 (2527.526 increase).

at none

MAASSIELO BREWERY — Turnover
532.32m /126 99ml for hell year 10
November 1 1982. Trading orefit 14.47m
164.07ml. Pra-tex prefit 16.43m
(f4.04ml. ofter finuncial charges
1593.000 (seemal. Trux 1814.000
171.64m). Earnings per [1 she're 22 5p
- 15 5p]. Interim dividend 2.1p [1 5p].
Company hopes to maintain satisfactory growth to the year end in spits of increasing pressure on margins. lory growth to the year one in spire of increasing pressure on margina.

DUPLE INTERNATIONAL (coath bedybuilders, engineer)—Results for year to August 31 1992 reported on November 27. Shareholders' lund's E3.64-x (£9.31mt; Currant assets) E11.04m (£9.06ml, including bank

Carponers Hall. EC. January 18 at moon.

CITY SITE ESTATES (groperly mucstor)—Results for the year to september 30 1962 reported on November 25. Shareholders lunds E3 16m; load assets in propesty E9 11m, other lased assets in propesty E9 11m, other lased assets in submines F29,130 mcrose in bank avordraft E647,560 Shares of the company are traded on the USM. Meeting, Glasgow, January 20, at 11 am.

AR TELEVISION (e member of the Bratish Electric Traction ground—Protes profits for ass months to September 30 1983, Elm (E3 05m), turnover 255,534 (E24,775); trading lose C3,973 (E6,138); mreest receivable 179m [E1 81m]; asseciates losses (T81,842 (C1,25m profits); los (658,050)

CS.973 [CS.185]: microst receivable CS.973 [CS.1873]: microst receivable CT 79m [Cf. 18m]: assectatos losses CR3.842 [CT.25m profits]: los [658.050 (CT 71m], leaving CM5.958 [CT 34m]. Interim dividend [15g1. Thomes Televisions' results have been adversely affected by Cests, including the Channel Four subscription. Biroctors say Thames is now trading prohibibly and the prohi for the full year is expected to be up to original budget expectations. CHAPMANN IMPUSTRIES (anvelope menufacturer)—Results for the 25 weeks to October 2 1982; Pre-tax prohis £44.000 [185.000]: turnover CS.82m [CS.3mt]: interim dividend 2p (samel: earnings per shore 6.37p (8.51p). Directors, expect impreved performance an second halt.

BARRANQUILLA INVESTMENTS forogerly developer and investor. Turnover CS.4m (CS.89m] for year to Septembor 30 1982 Pro-13, prohi 125m (EZm), etter interest of 1955.000 (ES0.000). Tax £702.000 (CD.900). Tax £702.000 (CD.900) (CD.900). Tax £702.000 (CD.900). Tax £

SRAITHWATTE AND CO ENGINEERS
—Pro-tax probte for hall-year to
September 50 1982. (402.792)
(1400.7951: turnever 54.01m [53.55m]:
tax 030.000 (5130.000]. Interim dividend op net 13pt, abserbing £108.460
(231.000), leaving retained erolate of
(231.000), leaving retained erolate
(231.000), leaving retaining per El
Share 11-8p (9.561. Recent improvements in order books allow board to
espect the results for the second helt
of leaving to match these of the lists
with all subsidiaries committeding.

Bond beats challenge at Pacific Copper meeting

nominations were defeated by healthy enough margins—about 5.4m shares in favour and 7.4m

against. But in the case of an extraordinary meeting the Bond group holdings of 3.14m shares would be removed from the vate.

would be removed from the vate, as representing interested parties, and thus the pro-Band support would probably fall below that gained by the Revell-Smith and Ryan camp.

After yesterday's meeting at which two Bond representatives were re-elected and two more added to fill vacancies. Use Bond Corporation interests have five of

They Hawkins reports from Harare that Mr S. C. Newman,

that Mr S. C. Newman, the chairman, forecasts in his annual review an operating income of R4m (£2.7mi for the curreot year to September 1983 compared with R1.7m in the previous year.

Coronation dividend doubt

MR ALAN BOND reinforced his included by Pacific and then put the seven seats in return for board control of Pacific Copper to the vote at an extraordinary 20 per cent of the shares directly board control of Pacific Copper board control of Pacific Copper at yesterday's annual meeting of The Revell-Smith and Ryan the small Australian coal mining company, successfully resisting atlempts by two rival nontinees to wio directorships, reports Lachlan Drummeod from

The level of support for the two outsiders—Mr Peter Revell-Smith of London and Mr Rart Ryao, the former chief executive of Coosolidated Gold Fields in Australia—however, suggests that the controversial proposal for Pacific to buy the Rhundda Colhery from the Bond group's Endeavour Resources may have a rough ride should it be recom-

ROUND-UP

THE WEAKNESS of the market for molybdenum, the steel todustry metal, has claimed A RETURN in the dividend list on a gald price of \$400 per ounce with copper at £900 per tonne and with copper at £900 per tonne and silver at \$10 per ounce. Gold and silver are currently above these tevels and are generally expected to reach higher averages next year.

Mr Newman points out that the bank overdraft in Zimbabwe is todustry nietal, has claimed another victim, Canada's Noranda Mines announces that it will cluse its large Boss Mountain molybdenum mine to British Columbia indefinitely from February 15.

Australia's Metals Exploration is to close its small, but high grade. Nepean nickel mine which is losing money because of the weakness of the metal price. It is also selling the 50 per cent-owned Widge-mooltha Dome nickel exploration interests to Western Mining. interests to Westero Mining, cash from which together with funds fro mine sale of some quoted investments witl cover repayment of Metals Explora-tion's A&Am (£2.4m) borrowings.

compared with R1.5m in the previous year.

A gold discovery in Eureka County, Nevada, is reported by the Canadian Precambrian Shield written just before the recent 20 per cent devaluation of the Zimbabwe dollar. This should boost income from metal sales—especially gold—but the South African-registered Coronation will be at a disadvantage when its Zimbabwe earnings are translated into rands.

Mr Newman bases his forecast

A gold discovery in Eureka County, Nevada, is reported by the Canadian Precambrian Exploration. Limited Resources: U.S. associate Precambrian Exploration. Limited assay results from 30 widely spaced drill holes indicate an orebody of some 1.3m tonnes gold per tonne, or better. The Zimbabwe earnings are translated into rands.

Mr Newman bases his forecast Canadian gold shares still appear to be fairly priced in relation to bultion despite their spectacular price gains of recent months, according to Nesbitt Thomson Bongard, a major Canadian investment house. Shares of strongly capitalised companies that have shown their companies to have shown their ability to remain problable under less favourable gold market conditions are preferred. They include: Campbell Red Lake, Long Lac Minerals, Sigma Mines, Agnico-Eagle, Pegasus Gold ond Rayrock Resources.

Some sort of fund-raising exer-cise, either for expansion or simply to help the hard-pressed

of looking at the best value in word-processing.

Another way

The meeting generated con

siderable heat over the Rhondda Colliery question but gave little light with Mr Bond refusing lo

answer questions on the basis that as a decision on taking up the colliery purchase option had

not been taken by the indepen-dent directors, it was not the business of the annual meeting.

Some 83 per cent of the

Mr Bond took the

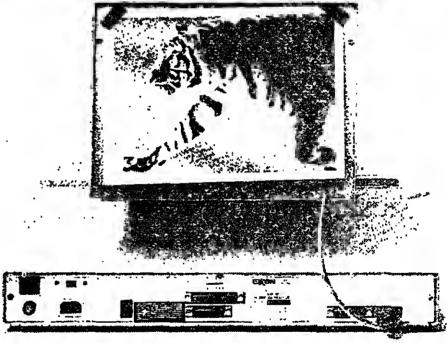
levels and are generally expected margin. lo reach higher averages next 1(c ac

Mr Newman points out that the bank overdraft in Zimbabwe is R49m, adding that it is unlikely that the eash flow at current gold prices and parities would be sufficient to liquidate this over-

A gold discovery in Eureka

draft and finance a dividend.

Pacific capital was voted at the meeting underlining the intense libbying underlaken by both sides and the seriousness with



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Crouch Group exceptional loss

Crouch Group yesterday the policy pursued during the announced an exceptional loss of £1.4m and a major change in strategy away from building up a property portfolio and back towards its traditional base of building up a property towards its traditional base of portfolio was a mistake.

towards its iroditional base of building and construction.
Crouch also said that Mr Ronald Glempsoo, group chairman since 1978, had been removed from the hoard. The announcement of the loss, the first slice Stock Exchange listing in 1969, came after the temporary suspension of Cronen's share listing on Tuesday.

Mr John Bishop, group managing director, said yesterday: "We believe that whilst we have had a setback the underlying condition of the group is sound. We have been in husiness in this area for 50 years and we have never made losses.

Mr David Shaw was appointed managing director of the sub-sidiary on October I and made a reassessment which Crouch says revealed that the book value of its property interests would have to be written down by

After a profit on other opera- Clempson.

lions of £161,000 the loss for Mr Dante Campailla has laked the six months ended on Septem- over as acting chalrman and the ber 30 is £1.24m. The interim company hopes the listic dividend is being omitted. pension will be lifted loda. The board has decided that suspended price was 62p.

chairmanship of Mr Clempson of trying in reduce dependence on the cyclicat building industry through building up a property portfolin was a mistake.

The company will in future concentrate on a bolance of housebuilding, construction and development with a more selective approach to property development. Inquiries have already been made about selling off some office property in Harrow and Crawley.

A review is also to be con-

A review is also to be con-A review is also to be conducted into the group's properly
developments in the U.S. "and
it is not envisaged that further
projects in this area will be
undertaken for the time being"
After making provision for
anticipated losses on UK developnave never made losses.

"We have made a mistake and we have acknowledged that mistake." At the annual meeting nn September 28 the dividend was increased and the hoard believed its property subsidiary Crouch Developments was profitable.

Mr David Shaw The annual meeting of UK investment and development properties on September 30 was 19.6m after the special privision and bank dehts totalled 18.7m. The statement says profitable.

says.

The board said that it believed the change io policy would restore the company to "a satis factory level of profitability nver the next 12 months." An extraordinary general meeting will be held on January 14 to ratify the dismissal of Mr

company hopes the listing sus-pension will be lifted today. The

London Shop gives boost to UK corporate bonds

THE UK carporate bond market, in which interest has been flaging over the last few weeks after a revivol in September, was given a hanst vesterday by the placing of a 10m next-century debenture stock by the London Shop Property Trust whose market capitalisation is only 40m.

The 12.5 per cent First Mortage Debenture Stock 2015/2020 was placed at 99.850 per cent hy J. Henry Schroder Wags. The gross redemption yield of 12.514 per cent was fixed at a 12.40 september 1981 revaluation of two comparable gilts, 13½ per cent Exchequer 2013/17.

The gross redemption yield of September 1981 results of the 2017 debenture at a series of fixed rate price of 127½p.

The gross redemption yield of September 1981 revaluation of two comparable gilts, 13½ per cent Exchequer 2013/17.

The gross redemption yield of September 1981 results of two comparable gilts, 13½ per cent Exchequer 2013/17.

The gross redemption yield of September 1981 results of two comparable gilts, 13½ per cent Exchequer 2013/17.

The gross redemption yield of September 1981 results of two comparable gilts, 13½ per cent Exchequer 2013/17.

The gross redemption yield of September 1981 results of the 2017 debenture af rival property around the such as the placing amounted to about £25m compared with a share of two comparable gilts, 13½ per cent margin above that the company is to use the money on particular projects.

The deal will formalise a tie-up between 1016 romality and 2020 at the option of the company.

The company is to use the purchase of insurance groups enabling Hambro Life salesmen in market a complete.

The deal will formalise a tie-up between 2016 finsurance projects and properting of Insurance groups enabling GRE with another a few two major insurance groups enabling GRE with another a few two major insurance groups enabling GRE with another a few two major insurance groups enabling GRE with another a few two major insurance groups enabling GRE with another two major insurance groups enabling GRE with another two major insurance groups enabling

Nadir plans three-way merger of his companies

on current market values.

Mr Nadir cootrols 40.6 per cent of Polly Peck either directly or indirectly and 12.7 per cent of Wearwell. Polly Peck owns 32.6 per cent of Cornell, thus valuing his aggregate holdings at almost £50m.

TRUST OF PROPERTY 22.6 per ceot of Cornell, thus valuing his aggregate holdings at almost 180m.

A merger has been rumoured for some time and the development of three companies is understood to have reached a line of the figures.

Trust of Property Shares Switzerland. The price of the proposes to make an interim transaction is 13.5p gross per stock dividend of 150,000 shares in Tops Estates, a direct property investment company representing one share in Tops Estates for line of the offer in the light of the figures.

Switzerland. The price of the figures.

Financial support for the deal has ben given by Merrill Lynch has ben given by Merrill Lynch line of the offer in the light of the figures.

HONGKONG (SELANGOR) Rubbles of the figures.

In Tops Estates for line of the offer in the light of the figures.

LONDON & NORTHERN SELLS COOPER'S London and Northern Groop is to self its 75 per cent interest of Cooper's Metals (Holdings) to Cooper's Metals (Holdings) to Coopers Holdings, a company incorporated for the purpose of the £2m purchase. The balance of the share capital is owned by Mr R. Cooper, his family and family trusts.

The £2m consideration will be paid in cash on completion.

MR ASIL NADIR, whose plans to iovigorate trade between Northern Europe and the eastern end of the Mediterranean have attracted strong market follows—to decide which interest holders—to decide which interest holders attracted strong market follows in the most appropriate attracted strong market follows holders on the mean through the mess appropriate which it is also proposed that Tops.

Butlet Tops

When the mess appropriate will be the most appropriate with the new tentures with the new tentures which it is allowed to mercell the mess appropriate which it is allowed to mercell the mess appropriate will be the most appropriate will be the

Derhyville which is 50 per ceot held by Mr V. Cobb and 50 per ceot by Mr A. Hanson, both directors of Nationwide Leisure have acquired 6.57m shares (28.9 per cent) in NWL from UB1 Service Industries of Switzerland. The price of the transfer of the 1350 press per cent.

certain printing plant equipment and office furniture at the Ban-hury factory for £142,500 plus

Chamberlain Phipps has ap-nroved the sale of the Phipps-Faire divising for £1.5m to a consortium headed by Mr E. Chaplin, a director of Chamber-lain Phipps and managing direc-tor of the Phipps-Faire Division.

CHAMBERLAIN

PHIPPS SALE

WOOLWORTH

Owners Abroad buys Falcon for £0.75m

of the offer in the light of the figures.

Hambro eyes overseas expansion

The official document issued tors, who own a further to sterrlay for the negative for the neg holders.
Consent of the Treasury has also been received and the sale, together with the preceding sale of 371 acres of the estate, is due for completion of December 31. The official document issued yesterday fur the acquisitoo by Guardian Royal Exchange Assurance of a 10 per cent stake in Hambro Life Assurance contains little additional information from the deal is coming from the UK life announcement of the deal.

Under this arrangement GRE is paying f39m for 12m new Hambro Life shares at 325p a share. The document sent to Hambro Life shares at 325p a specific plans for the use of the money on particular projects.

The deal will formalise a tie-up between two nuajor insurance of the share capital is owned by Mr. R. Cooper, his familia and office furniture at the Bandard office furniture at the B

76.1 per cent and 100 per ceot respectively.

J. AND F. BROWN Johnson and Firth Brown ! approved resolutions at an EGM to form Sheffield Forgemasters Holdings and to sell certain sub-sidiaries of JFB Holdings Inc. to Loodon and Midlaod Indus-

Completion of the Forgemasters agreement is expected before the end of the month. The sale of JFB Holdlogs Inc to LMI remains conditional upon the approval of LMI share-holders at an EGM on December 20.

PLATIGNUM

Woolworth Holdiogs bas been advised of the following present Platignum has disposed of its shares in Superfine Tapes, a wholly owned subsidiary. The consideration amounted to 197,398, including loter company loans of \$40,970, which was paid interest in its voting shores: Merchant Navy Officers Pension Fund 4,000,000 (5.96 per cent); Prudential Corporatioo Group of 197,398, including loter compar Compaoies 7.041,666 110.48 per loans of \$40,970, which was pa ceoll; and the Charterhouse in cash. The net value as Group 3,666,666 (5.46 per cent). January 31 1982 was £67,418. The net valus as at

SHARE STAKES

This unrouncement appears as a matter of record only.

Venture Link

Limited

Has arranged a Private Placing

of Shares and Debentures for

£462,000

on behalf of

CENTURY PUBLISHING

CO.LIMITED

LONDON W.I.

The Fleming Mercantile Investment Trust plc National Water Council Superannuation Fund and others

> Placing arranged by Venture Link Limited

London EC4R 0BA

Sedgwick Group - Director holding to 5.4m (23.43 per cent). 40,000 ordioary.
Wolverbampion and Dudley

Brewery — Mr E. J. Thompson and Mr C. E. Guinness. as trustees, have sold 26,840 ordinary, Mr D. G. F. Thompson was a beneficiary for 5,298 ordinary.

Amos Hioton and Soos - The Equitable Life Assurance Society has an interest of 5.1 per cent to the limited voting ordinary. Magnolla Group (Moulding) -Company has received notifica-tion from County Bank that various pension funds and trusts

under its management own 5.78 Rowtoo Holels (Holdings) -Gresham House, together with its subsidiary Security Change, are interested in 858,500 ordinary 12254 per cent).

Cardioal Investment Trust— The Government of Kuwait bas disposed of 185,000 deferred, reducing its holding to 1m

John L Jacobs — Hambros Investment Trust has acquired 200.000 ordinary, increasing its

its holding to 909,000 ordinary (14.95 per cent).

Bespak — M.LT. Securities (2

subsidiary of Hambros) has reduced its interest by 245,000 shares to 1m.

British Kidney Patient Assoeiatigo Investment Trust — Norman Nominees holds 96,700

Norman Nominees holds 96,700 sbares f15.64 per ceot) and Legal and General Assurance Society 56,000 shares (9.06 per cent).

Brockhouse — Caparo Industries has purchased 250,000 ordinary, locressing its holding to 1.12m (6.48 per cent).

Marks and Spencer — Director Mr M. M. Sacber bas disposed of 50,000 ordinary.

50,000 ordinary. Reckitt and Colman — Director Mr Timothy Colman bas disposed of 32,000 ordinary, reducing bls holdlog to 564,804 (0.45 per

The Cardiff Property — Various funds and trusts under management by County Bank own 5.9 per cent of the ordinary,
European Ferries — Director
Mr D. J. Bradford, in respect of
Mrs K. I. Bradford (doceased), has disposed of 67,484 ordinary.

Aprel Vol.t 128p 454p 197 217 250 350 550 280 50 nr'd Met. In 344p 119p 447p 2 \$100 C=Call

EUROPEAN OPTIONS EXCHANGE

Cable and Wireless Interim Results

Comments on Results

The pre-tax profit of £67m is an improvement of 47% over the £45m for the comparable period of last year. Trading profits and turnover increased by 27% and 17% respectively after adjustments for Bahrain to an associated company from 1st July 1981.

Results expressed in sterling for a Group which has most of its activities overseas have been helped by current sterling exchange rates. The trading profit has increased over the

comparable period of last year by some £5m currency gain. The trading results have continued to show improvements particu-

larly from sustained

progress in achieving

improved margins. The telecommunications business in the United States is producing improved profits significantly above the level of the comparative period last year. The volume of business

NOTES

1. Changes which affect comparative figures are:-

- a Bahrain was a branch until 1st July 1981 when it became an associated company: b) Hong Kong was a branch until 50th September 1981
- when it became an 80% owned subsidiary. 2. The estimated tax liability of £24m consists of UK tax -£16m (29m - 1981), overseas tax £7m (£10m - 1981) and
- associated companies $f \text{Im} (\ell \text{Im} 1981)$. 3. Exchange differences arising from the translation of foreign currency assets and liabilities into sterling at
- 1981 1982 £M ℓM ξM Historic Cost Results 193 178 354 Trading Profit 54 41 78 14 Investment and Leasing Profit Before Taxation 45 97 20 37 Tax _7 Minority Interests Profit Attributable to 24 53 13.8p 8.9p 20.2p Earnings per share

The unaudited results for the six months ended 30th September 1982 are -

30th Sept.

6 months to 6 months to

30th Sept.

- 4. Trading profits include £8m : £4m 1981's from profits of the associated companies managed by the Group. calculated on the 270 million shares currently in issue. During the six months to 30th September 1981 the share capital was 100 million CI shares. It was subdivided and increased during October 1951.



30th September have been excluded. 5. Earnings per share for each six monthly period have been

handled by the Group continues to increase, but at a

slower rate, reflecting current economic conditions.

of cash is benefiting results and as investment is made

in new business opportunities, interest income will be

Future investment income will reduce by some

£3.5m annually following an exceptional tax payment

ordinary gain and

respectively.

balancing charges which

appeared in the accounts

in March 1982 and 1981

Interim Dividend

The board has de-

clared an interim

dividend of 3.2p per

ordinary share (1981

- 2.6p) payable on 1st April 1983 to share-

holders on the register

The cost of the interim

dividend is £8.64m

(1981 - £7.02m).

on 1st March 1983.

on 1st January 1983 resulting from the net extra-

replaced progressively by trading profits.

31st March

The increased attention given to the management

2 F,259.70 183 NL 81 87-91 ·1114 NL 82 88-92 10 .10.60 - F.115.60 F.105 C P.107.50 F.109.50 F. 106 F.22.50 NATN C PHIL C PHIL C PHIL C PHIL P RO C RD C RD C RD P RD P UNIL P 2.40 0.80 0.20 0.30 0.30 1 3.8 0,70.8

Public Works Loan Board rates

Effective Decomber 15

*Non-quota loans B are 1 pee cent higher in each case than noo-quota loans A. † Equal instalments of principal. ‡ Repayment by half-yearly annuity (fixed equal half-yearly payments to include principal and interest). § With half-yearly payments of interest only.



COMMODITIES AND AGRICULTURE

Heaviest turkey sold

THE WORLD'S heaviest turkey was sold yesterday for a record price of £3,000. The bird, which weighed 78 lb 143 oz was produced by Dale Turkeys of Shropshire and heat the previous record set in 1980 by

The lurkey was bought for Dewhursts at an auction of heavy (urkeys held on hoard HMS Wellington in London and proceeds from the auction went to the King George's Fund for Sailors to aid the families of merchant seamen who served in the Falklands.

 SIERRA LEONE's Marampa iron ore mines bave been re-opened after a seven-year closure. Austria has lent Sierra Leone \$16m to resume mining under a 1980 agreement making the state minlog company Austromineral manager and sales agent for the mine's out-The mine is expected to produce at least 1m tonnes of high grade ore concentrate a

 WORLD VOLUME of rice maded in 1983 is expected to be about 11.7m tonnes, unchanged from the revised intal expected for this year, according to U.S. Department of Agriculture cal-culations. In a circular on the world grain situatom the USDA worse gram situation the USDA said exports by the U.S. and India are expected to fall sharply and those by Thailand, Thiwan, Venezuela and Vietnam

• DEMAND for wool at this week's auctions in Australia remained weak, with the Australian Wool Corporation buying in 40.5 per cent of the bales on offer in Brisbane, 39

Copper prices fall

BY JOHN EDWARDS, COMMODITIES EDITOR

in base metal prices on the market fell sharply in the London Metal Exchange yes-morning when support buying terday, reacting to the sharp nvernight fall in the New York market. The cash price of high Tin Council. However the mar-grade copper closed £19.25 ket rallied later when the lower at £691 a tonne. The mar. buffer stock resumed buying. ket came under heavy selling oarticularly from U.S. speculators. who had previously played a large part in pushing values to the higher levels for present to decide on the level 13 months last week.

There was general disappointment at the reaction on Wall Street and New York melal markets to the cut in the Federal discount rate.

This was reflected in the sud-This was reflected in the sudden reversal in the gold price, which lost \$12,75 to \$435.5 an ounce, and also hit silver and platinum bard. The London bullion spot price for silver was cut by 30.15p to 638.7p an ounce at the morning fixing and declined further to 626p in the afternoon. Free market in the afternoon. Free market platinum tumbled by £13.40 m £214.55 an ounce.

COPPER led a general decline but for a different reason. The failed to emerge from the buffer stock of the International

present to decide on the level of export quotas for the first quarter of 1983. It is generally expected that the present 36 per cent cutback will be main-

Russia buys U.S. wheat

BY OUR COMMODITIES STAFF

However, there must be some concern that in splte of these

sever export restrictions, the buffer stock is reported to have been forced to buy some 6.000 tonnes during November to support prices. Consumer demand remains so poor the 1 the market, both in Penang and London is heavily dependent on buffer stock support huying to sustain current levels. The Straits tin price in Penang Tin prices also lost ground, "floor of \$M29.15 a kilo.

WHEAT SALES of 600.000 are expected to be announced tonnes to the Soviet Union, soon, bringing total husiness to between 1.5m and 2m tonnes, to come, were announced by the U.S. Department of ected world grain production Agriculture (USDA) in Washington. The sales are the first reported purchases of U.S. wheat by the Russians under the seventh year of the grains supply agreement between the two countries although the Soviet Union has already betacht 2.9m tonnes of maize. In the sixth One of the deal Zimbahwe will year of the sgreement, which

THE INTERNATIONAL TIN
Council has published its latest study on the tin industry, World Tin Mining — Operations, Explorations and Developments, giving updated information on recent tin mining activities.

Tonnes of maize. In the sixth one of the deal Zimbehwe will exchange 42,500 tonnes of maize for 25,000 tonnes of wheat; the purchases totalled 13.87m tonnes second stage provides for Australia to buy or exchange a further 57,500 tonnes of wheat; the mining activities in the sixth of the sixth giving updated information on Reuter reported from Wash. Zimbabwe currently has a maize ington that further wheat sales stockpile of nearly 2m tonnes throughout the world.

Reuter reported from Wash. Zimbabwe currently has a maize ington that further wheat sales stockpile of nearly 2m tonnes by the U.S. to the Soviet Union; but has a shortage of wheat.

Brazil sells sugar to USSR

RRAZIL confirmed that it has sold 500.000 tonnes of sugar to the Soviet Union but claimed that the deal was signed nearly three weeks ago. Reuter reported from Rie de Janeiro that Sr Confucio Pamplona, president of the Brazillan Sugar and Alcohol Institute, had agreed to supply the Russians with 300,000 tonnes of raw sugar and 200,000 tonnes of raw sugar and 200,000 tonnes of refined (white) sugar. The Soviet Union siso has an option, invalid up to May, to buy a further 125,000 tonnes each of raw and refined sugar.

There was little market reaction since traders said the Russian purchases had already been discounted when rumours of the Soylet Union bnying up to 2m tunnes cir-culated some two weeks ago.

The Brazilian announcement merely confirms that the Russians have made subthe Russians have made sub-stantial purchases—as is usual at this time of the year. However, there are further rumours now of bad weather conditions damaging the Soviet beet crop, particularly beets stored in the fields.

The EEC Commission at Its The EEC Commission at its weekly selling tender anthorised the export of 45,750 tonnes of white sugar, with a maximum subsidy of 25,248 Enropean currency units. This compared with the previous week's figure of 46,500 tonnes with a subsidy of 34,646 units. This week's higher subsidy, equivalent to higher subsidy, equivalent to around \$227.50 a tonne fob and stowed, simply reflects the drop in world market values during the past week. It was in line with market

TROPICAL TIMBER PACT

Moving closer to agreement

and how they might function.
A group of experts from tim-

ber producing and consuming countries decided that, provided consensus is reached to have such an agreement, a new International Tropical Timber Organisation (11TTO) should be created at a location yet to be fixed. The organisation would be supervised by an International Tropical Timber Council

The council would be beined by separate committees to deal with the Agreement's four main goals—promotion of research and development, improvement of market intelligence, creation of more processing facilities for raw timber in producing countries before export, and expanded reforestation and forest management programmes.

Differences remain among countries about how the four

tion with an understanding planned Agreement's contents, room for cuts in tropical tim-reached in Geneva on the in-stitutions which should serve it sla. Indonesia, the U.S. and not be successfully replaced by Britain are expected to make proposals closer to the main negotiating conference to be held in Geneva from March 14-

31 next year. The Japanese chairman Tatsuro Kunugi said accord on the institutional framework had paved the way for an overall agreement which would open new horizons for the timber industry worldwide.

Japan. the largest importer of timber with annual purchases in 1978-80 of \$2.84bn, is very keen to get an operational agreement on timber as soon as possible.
The EEC, which is the second

largest importer with \$2.36bn in 1978-80, has yet to prepare a formal negotiating position for the proposed agreement. It is expected to make specific pro-posals early next year after conis in trouble, there is little room for cuts in tropical tim-

The main producers— Malaysia with annual exports of logs, sawnwood, veneer and plywood of \$1.7bn -- 1 Indonesia with \$1.57bn—are keenly interested in ensuring that the new Agreement allows them to export more processed woods.

The U.S. with imports in 1978-80 of about \$600m has so far taken a back scat in the five-year-long preparatory negotiations in Geneva. It wants to ensure that roust fiers should be allowed to hold conshould be allowed to hold consultations with producers before long-term production poscies are fixed.

THE PLANNED International main goals should be fulfilled, states in Brussels. Although is now strongly emphasising the Tropical Timber Agreement has and only Japan has so far promoved a step nearer to complevided detailed proposals for the is in trouble, there is little duction policy which prevents deforestation. The United room for cuts in tropical tim-ber Imports because they can-not be successfully replaced by local hardwoods.

deforestation. The United Nation's Environment Pro-gramme (UNEP) sees forests as an important means of mainlaining ecological balance and a reservoir of breeding materials essential for reforest-

place strong emphasis on pre-venting logging in natural forests and on the creation of "managed forests" which would be used for timber supplies.

A possible subject of dispute in later talks for the Agreement will be the kind of "comprehensive" timber development programme. The problem is that while halance between referestation, forest manage-The United Nations Food and ment and logging is crucial, Agriculture Organisation (FAO1 consumers may suspect that which has conducted several producers will convert any pro-studies on the possible contri-gramme into an output control producers will convert any proafter con- butions to economic develop- strategy to prevent drops in member ment made by timber industries prices.

Threat to Indian tea auctions

BY P. C. MAHANTI IN CALCUTTA

A warning of the intention to bypass the auction system has been given by S. K. Mehra. chairman of the Indian Tea Association, which is the most representative body of the tea industry. Addressing the annual meeting of the Assam branch of the association, Mr Mehra said: "While accepting the

to sell direct to consumers both within India and abroad on a large scale may start soon, especially at the beginning of next year when tea supplies are likely to be tight because of a short crop this year.

There is no direct legal obli-

A move by a powerful section of the tes industry to sell tea outside the suction system could well reduce offerings at Indian auctions seriously and thereby put the future of the time-tested auction system at risk.

A warning of the intention to bypass the auction system at robairman of the Indian Tea within India and abroad on a getting for the gardens to offer the suction compulsion in distance that our characters and the suction centres is, however, no such compulsion in the first to all concentred that our characters and the suction centres is, however, no such compulsion whether the gardens to offer the suction centres is, how

proved average to be unsatis-

Two (ea auctions scheduled in Calculia this week have been cancelled due to warehouse

PRICE CHANGES =

BRITISH COMMODITY MARKETS =

in lonnes Dec. 15 + or Month ago otherwise	Dec. 10 + or Menth 1982 — ago
Metals	Dile Coccount Phill 8446w +5 \$420
Aluminium \$810.615 £810/815 Free Mkt. \$970 lead \$865,885	Coconut Phil) 8440w + 9 8420 Croundnul 8455w -5 8470
Copper	Lincoart Crude, £310 2
Cash h grade, £891.26 -13.26 £870.5	Palm Malayan . 6387,52 +7,5 .\$365
5 mths. £910.25 -18 £892.75	Seeds
Ca h Calhoge., L848,26 -19,75 £840,5	Copra Philip 8285w \$280
5 mths £873,5 - 18,5 £861,5	Soyabean U.S. 5236.5 -2,1 5840
Gold trey oz 4-135.15 -12.76 5411	***************************************
Lend Cash £263.5 -4.5 £279.25	Grains Grand Grand Charles
3 mths £273,754,6 £289	Barley Fet.Mar C114.05 -0.85,11,12.55
Michol £4183.5 £4183.5	WheatFut, Mar 1118,30 -0.2 T117.15
Free mkt 160 190c 165.1850	Ho.2HerdWint
Platin m try pz C260 £860	Othey
Freemat. £214,56 -14,4 £212.80	ogmmodities
Dulcksivert . \$3(9.5%) - #465:385	Cocoa ship t £1061 £1013
Silver 1:09 02 638.70, -50,15 609.65a	Future Mar £1030.5 -4 £977.5
5 mths 655.20 - 30.80 623.05p	Coffee Ft Mar £1577 -17 £1618.5
Tin Gash . 17455 - 72,517267,5	Catton Alnday 69.70d -0.3 68.30c
	Gas Oil Jan #220.56 \$283.25
	Rubber ikile: _60e -0,2547.8p
Tungeten \$102.80 \$102.59	Sugar (Raw), 197w +1 1104
We frm 22.04 jb \$78 84 \$86 90	Woolt ps 64s kt. 372p kiloi 368pkilo
2rng Cash., 4405.5 · 5 2432.5	
3 mths 1418.85 -4.251437.5	t Unquoted. 2 Jan. w Osc-Jen. † Par
P.oducers 5600 \$800.950	18-Ib lloak. * Chang cocos, n Hominet.
P.QUUELINI . VEVE	

LONDON OIL SPOT PRICES

Change Latest + or CRUOE DIL-FOB . S per barreli Avablan Light 30.50 —0.52 Iranian Light 20.00 Arabian Heavy 28.50 29.50 +0.25 Horth Sea Portlost... 31.50-31.75 —0.15 Alnean Bonny Limi 58.50-53.50 +0.25

PRODUCTS · North West Eerope CIF · 6 per tenne?

GOLD MARKETS

Gold fell \$12} an nunce from Tuesday's close to the London bullion market yesterday to finish at \$454;435;. The metal opened at \$436;437; and touched low of \$434-435. However it recovered later in the day in line with small improvements in

New York.
In Frankfurt the 12½ kilo bar was fixed at DM 34,330 per kilo 18437.0 per onnce) against DM 35,500 (\$451.0) previously and clused at \$437,438½ from

\$449-450.

In Luxembourg the dollar per ounce equivalent of the 121 kilo bar at the fixing was \$435.85 from \$451.60.

In Paris the 121 kilo bar was fixed at FFr 97,000 per kilo

(8435.13 per ounce) in the after-noon compared with FFT 97,000 (8435.69) in the mirning and FFT 99,500 (8446.54) on Tuesday In Zurich gold finished at \$437-\$440 from \$449.452.

Turnover: 4,204 (S,628) lors of 100

GAS OIL FUTURES

Month

LONDON FUTURES Month Yest'rday's +or Business Close Oene

S per troy

5 per troy ounce o Turnov8r: 1,266 (1,061) lots of 100 troy euncas.

nec 15 Gold Bellion (Tine eunce) Close. £431: 4353 12258 12701
Opening ... £4353 43774 1£270 270 181
Morning fixing £435.25 1£269.171
Alternoon liamo. \$437.50 1£270.982 Krugrnd i449 450 i13783, 279 ls l King Sav ls Krug i230 ls 23 ls 12143 143 sq. Victorie Sov 4 Krug i118 118 i173 ls 73 ls French 806 ls Brup i448 450 ls 16293, 30 ls 90 pesos Mex Maple leal 448 450 ls 16278 28 ls 100 Dor. Aest Hew Sov 560 ls 62 ls 16371, 58 ls 1

EUROPEAN MARKETS

ROTTEROAM. Gecomber 15

Wheat—IU S 5 per jonne). U S Two
Dark Marc Whiter 13 per cent Jan 188.
U S No. Two Rad Winter Jan 155, Feb
156, March 157 U S No Three Amber
Ourum Abrill-May 175, No. Two
Horthern Sorne 14 per cent Dec 183.
Jan 164 Feb 185, March 187
Maiae—IU S 5 per jonne) U.S. No.
Three Yallow afteel 117, Aoni-Jan 117, Feb 177, March 117, Aoni-Jan 119, July-Seor 121, Oct-Oct 122
Science.
Soyabeons—IU S S per jonne) U.S. No.
Soyabeons—IU S S per jonne) U.S. No.
Local Code (FFr per 200 kHos): Oce 105-1150, March 1181-1162, May
No. 119, July-Seor 121, Oct-Oct 122
Science.
Soyabeons—IU S S per jonne) U.S. No.
Local Code (FFr per 200 kHos): Oce 105-1150, March 1181-1162, May
No. 119, July-Seor 121, Oct-Oct 122
Science.
Soyabeons—IU S S per jonne) U.S. No. 120, March 2245-1245.
Soyabeons—IU S S per jonne) U.S. No. 120, March 2245-1245.
Soyabeons—IU S S per jonne) U.S. No. 120, March 2245-1245.
Soyabeons—IU S S per jonne) U.S. No. 120, March 2245-1245.
Soyabeons—IU S S per jonne) U.S. No. 120, March 2245-1245.
Soyabeons—IU S S per jonne) U.S. No. 120, March 224, Nov. 1224, Nov. 122

30 Wosta

PARIS, Dec 13.

Cocoe—(FFF por 200 kHoo): Ose
1105-1150, March 1181-1182, May
1:95-1210, July 1200 bid. Sept. 12451260, Osc. 1275-1300, March 1310-1330.

Seles ar call: 7
Sugar—[FFF per toone]: March
1570, Moy 1814-1520, July 1645
1655, Aug 1880-1696, Oct. 1730-1740,
Nov. 1730-1740, Dec. 1795-1805, March
1860-1890, Salos at cell: 21.

BASE METALS

COPPER PRICES camo under heavy selling pressure on the London Metal Exchange following the shorp toversal for Well Street overnight and the weak ness at proclous merals, all of which secouraged substantial speculative selling. Three months initially tell from CS20 to CS15, rotted briefly to CS20, but encountered renewed selling to close the late Korb at E311.75, Forward for dropped to E7.395 in the absence of buffer stock support but subsertionally refired to close at £7.435 following the emergence of buffer stock buying and: U.S. physical demend. COPPER

COPPER Official - Unefficial -t

Cathodes 854-6 -15.7 848.5 -13.7 8 months 879-80 -14.2 875-4 -10.5 84ttlent 956 -15 - 70.4

Amelyamated Metal Trading reported frot in the morning ceeh Higher Grede traded at £897.50, three months £919.00, 19.50, 20.00, 19.50, 18.00, 18.50, 18.00, 17.00, 17.50, 17.00, Cathodes £879.00 Karb: Higher Crade, three months £916.50, 16.00, 15.00, Attanton Higher Grade, cash £896.90, three months £915.00, 14.00, 15.00, 14.50, 14.00, 12.00, 11.00, 10.50, 10.00, 95.0, 10.00, 10.50, Standard: Cathodes, three months £931.00, Karb: Higher Grade, three months £911.00, 10.00, 10.50, 11.00, 11.90, 11.90, 11.00, Turmover: £8,950 tonnes Prices began 88 lower for reflect the limit-down close in How York but quichty bounted beck on continued physical domand. Now York weakness brought prices to the lows but a rally left values at the highs on the close, reports Premier Men. Yest day's + or Ousiness close — Done S U.S. Bus.

per lonne
288.00 - 7.00 298.50 91.00

lan 288.50 - 5.00 298.50 91.00

solution 288.50 - 4.00 288.75 81.00

March 279.00 - 4.00 279.00 75.00

May 271.50 - 4.50 274.00-70.50

June 271.50 - 8.75

Jely 867.00 - 8.00
Aug 075.00 - 8.00
Turnover: 4.204 (S.628) jors of 100

TIN Official - Unofficial -1 High Oracle & & C Cash... 7400-5 -181 7458 & -72.0 7450-2 -70.5 7450-2

LEAD

LEAD Official — Unofficial — 1

Cash. 263.5.4 -5.12 863.4 -4.5

Fomonths 376.5.4 -5.17 875.5.4 -4.5

Bettlem 5, 264 -5 120.5.28

LS. Spot — 120.5.28 Lest—Morning: Cash £254.90, three months £278.00, 77.00, 75.00, 74.00. Karb: Three months £274.00, Attornoon. Three months £274.00, 74.50; 75.00, 74.90, 74.00, 72.50, 74.00, 74.90, 74.00, 72.50, 74.00, Karb: Three months £274.50. Tumover: 7,575 tonnes.

a.m. + or p.m. + or nilicial - Unofficial -Cash 406.5-7 -3.5 405-6 -5 5 months 417.7-8.25 -4.55 418.5 -4.25 Settlem : 407 -3.5 -39.75 40.7

ALUMINIUM

a.m. + er p.m. + or Official - Unofficial -1 a-mohtne ear. 5-8 -1 627-0 -1

Aluminiem - Morning: Cash £609 00, hrate monthe £827.50, 28 00, 27.50, 28 00, Kerb: Three months £627.50, 21.00, Kerb. Three months £627.50, 25.00, 28.00, 25.00, Turnover: 32.100 tonnes.

NICKEL

NICKEL a.m. + or p.m. + or Official - I Spot...... 2200-5 -42.5 2180 5 -42.5 3 months 2240-2 -61,6 2220-5 -30,5 Nickel - Memins:

£2.240, 45, 50, 40, 42, Kerb: Three months £2.245, Allernoon: Three months £2.345, 40, 30, 20, 10, 20, 25. Turnover, B40 ronnes. SILVER

Sriver was treat 30,150 en ounce lower for spot derivery in the Landon bullion methet yearenday at 638,70. U.S. caurvalents of the Bring levels were, apol \$10,318, down 50.4c; Information \$10,562, down 50.4c; Information \$10,798, down 54,0c; and 12-manh \$11,358, down 55,4c. The motel opened at 637,630a (\$10,31,10,35) and slosed at 627,630a (\$10,31,212,77).

SILVER Bullion + or LME + por fixing - p.m. troy oz. price Unoffic Spot ... 638,70p -70,1 826,26n -42,2 3 menths, 655,20p -50,8 642,75p -42,7 **Immorths 704, 40p ** 6.7 **

**Lass—Tumover: 125 (346) loss of 10,000 oz Morning: Three months 654,0, 55 0, 55, 55, 56, 548, 54 7, 54 8. Kerb: Three months 654 5, 55.0. Afternoon: Three months 653 5 42.0, 41 6. 42 0, 421, 42.5 Kerb: Three months 642 5, 43 0, 44 0, 43 0, 43 5, 44 0.

COCOA

In thin conditions values reded in a narrow range, reports Gill and Duffus.

Yeslarday's

COCOA . Close + or Business
Done Merch 1111-13 -3.5 111-13 Salas: 2,633 |8,018 | lors of 10 tonnes. ICCO-Dully pnce for Dac 15: 72,44 173 05), Indicators price for Oac 15: 72 03 |72.01].

COFFEE

Char support ended a gradual recovery from the asrly lows following keen commission house sattling sround the opening, reports Oreset Burnhem Lembert. A relly to this highs met with renewed preseure on nearbys which enduced a wooker close.

COFFEE Yest'day's + Or Business Core

January ... 1740.41 -23.0 1755.40
March 1676.78 -17.0 1595.68
May....... 1470.78 -2.6 1485.58
Jefy.... 1576.77 -1.5 1685.68
Sept. 1300.05 1310.90
Hov 1255.64 -0.5 1850.45
January ... 1210.39 -10.5 Sales ... 2722 (4.675) lots of 5 tonnes.
(CD Indicator price for Oac 14. [U.S. cents per pound): Comp. deily 1979
131.98 1132.32]; 15-day sverege 132.58
(132.68).

GRAINS WHEAT BARLEY

-0.18 111.75 -0.20 114.05 -0.25 116.80 -0.21

Morch 110 paid 6-97 Cozat. Heat on-quoted.
HIGCA—Locationel ex term spot prices. Feed baricy: Eactorn 109-70 N. East 110-40, Scotland 109-70. The UK mentatery coefficient let the wack beginning Monday Occember 20 19 0xpected to remain enchanged.

POTATOES

Chartist support at £96 bosts April and £100 basis May held pinces steedy of these lower lovets, until Mey broke through towards the close, prompting £ per tonna 76.40 76.50 96.70 98.10 98.00 103.50 68.50 68.20 76.30 76.20

top-loss selling, reports Colay and MEAT/FISH Harper. Turnover: 1,245 (834) lots of 40

RUBBER

The London physical methol opened unchanged, ettracted inflo interest throughout the day and closed coper tewls and Pear reported a Junuary lob price for No. 1 RS3 in Kuela Lumbur of 189 75 (seme) cents a kg and SMR 20 168,5 [same).

Jan 68,80,50,60 60,60 61,60 Feb 50,40 51,60 61,60 Feb 50,40 51,60 61,60 61,60 Feb 50,50,60,60,80 61,60 JanMch 55,80 55,70 60,10 60,20 60,50 55,50 Apl-Jne 81,90 62,00 62,40 62,50 82,00 63,20 64,50 64,50 65,20 64,50 Sales: 388 | 1285| tots of 15 tonnes; nit | Init| tots at 5 tonnes Physical classing prices (briverat

SOYABEAN MEAL The market opened 50p lower in duli conditions, reports T G. Roddick. Prices drilled on mixed salling.

Yeslerdy's + or ausmoss . Close — Done £ per tonne 125.90-11,0 - 5,50 140,00 120,50-40,5 - 0.55 141,00-40,70 123,20 33,c - 1,10 158,50 30,20 138,60 37,7 - 0.56 137,50 138,50 37,5 - 0.70 137,00 128,50 38,80 - 0.25 138,50 47,8 + 0.25 Solss: 41 [18] lols of 100 fannes.

Solss: 41 [18] tols of 100 fonnes.

SOYABEAN DIL—The market opened
\$4,00 down in thin trido and ericas
remained within narrow ranges. Close
[U.S. 5 per ronne) Dec 404 00, 408,00,
408,00-417.50; April 424.00, 424.50,
434.00; June 431 00, 432 00, 431.50430 50; Aug 433 00, 439.00, untraded;
Oct 435 00, 445.00, untraded. Oct
435,00, 453.00, untraded. Seles: 37
[35] lots of 25 tonnes.
Turnovar: 695 [1,256] lots of 100
troy ouncas.

SUGAR

LONDOH OAILY PRICE—Row sugar C97.00 (£96.00) a tonna cil Occ-Jon Shipment. White suger daily price (97.00 (1256 out) a suger daily price (137.00 | sams).

Overmight confirmation that Stazil had sold 500.000 tonned row and white auger to the USSR on a government basis produced a stander tone. Now York failed to follow the upwerd trend and all the gams were lost by the close, reports C. Czarnikow.

No.4 Yesterday Previoes Business Con-tract £ per tonne

Jan... 108.50-12.50 109.95-09.50 110.75
March 112.40-12.50 112.50-12.85 116.75-11.75
March 112.40-12.50 112.50-12.85 116.75-11.75
Aug... 115.50 16.50 118.75-18.90 117.90-16.00
Aug... 121.40-11.56-121.50-21.55 122.75 22.35 March 137,25 39,46 (8),60 41,80

Sales: 2.033 (2.075) lors of 50 tonnes
Tere and tyle delivery prico for
granulated basis white ougar was
\$406 90 (same) e renne for home trado
and C201.50 (£300 50) for execut.
International 50gar Agraemani (U.S.
cents per pound) tob and otowad
Caribbeon ports. Prico for Occ 14:
0aily price 5 98 (5 53): 15-dey
delivery 6.48 [6.51]

COTTON tiverPOOL—Spot and shipment sales amounted to 72 ionnes. Further replanishment buying took place without any major domaind developing. Scettered operations while African styles again corrected attention.

WOOL FUTURES LONDON NEW ZEALAND CROSS-BREDS—Close Im order buyer, seller, business! New Zeelend conta per kg Dec 370 seller. 360; Jan 354, 370, 365-365, March 366, 372, 388; May 377, 384, nil, Aug 393, 400, 394; Oct 396, 400, hil, Dec 402, 405, 403; Jan 404, 409, 406; March 410, 412, 411; Moy 416, 413, 418, 5ales: 44, exposer GREACY MODI—Close (in 418, 5ales: 44.

SYDNEY GREASY WOOL—Close (in order, buyer, sailer, business). 4 ustralian cents por hy 0cc 511 0, 512.0.

512 0-610 5; Mayreh 525 0, 527 0, 525 0; May 538.0, 539 0, 538.0-537 0; July 548.5, 549.0, 546 0; Oct 536 5, 537 0, untraded, Dec 630 0, 539.0, 539 0-538 5; Mayreh 547.0, 551.0, untraded; May 549.0 550.0, untraded. Salus. 24.

MEAT COMMISSION-Average lat-

(+1.36).

SBITHFIELD—Pance per pound Best: Scottash killad sides 85 5 to 90.0; Ulster hindquahters 108 3 to 111 2, lorequeriers 59 3 to 64 2 Veol. Outch hindo and end; 142 0 to 146 0 Lamb: English smoll 56,0 to 72 0, medium \$4 0 to 63 0, heavy 62 0 to 64.0; Scottish heavy 61 0 to 64.0. Imported—New Zealond Pt. 51 0, PM 51 0, Y4.40.0 pork: English, under 10016 43 0 to 53.0, 100.12016 47 0 to 52 0, 120.18016 39 0 to 48 5.

GRIMSBY FISH—Supply fair, de-mand good. Prices of ship's side [unprecessed] per stone: Shell cod 6 00-07-00, codiums, 14 20° large hed Co Di-L'-00, 200 logs - 200 logs - 100 logs

HIDES—Birminglism. Second clears Qa. 31-35 5 kg. 62 0p a kg [53.5p); 28-30 S hg. 88.5p a kg [70 6p]; 22-25 5 kg. 78 8b a kg [78 6p] Light cows; 25 5 hg. 71 2p a kg [77.0p].

-INDICES FINANCIAL TIMES Bec. It Goe. 15 Mithinge Y'ar ago 255.52 855.77 250.02 246.80 (Sase: July 1 1952 - 100)

REUTERS Dec. 15 Ooc. 14 M'th age Y'er age 1568.6 1572, 5 1551.6 1514.6 |8see: Saptember 16 1931 = 1001 MOODY'S Dec. 14 Dec. 15 M'th ago Y'ar ago 998.8 995.0 076,6 072,6

(Dacamber 31 1931 - 100) DOW JONES Dow Dec. Oec. Monrn real 8pot 153.73 131.90 186.111 Fut rs 136.21,136.64:135.33 |Base: Oecamber 31 1074 - 100)

Aluminium price recovery forecast

BONN - The beginning of a

sustained reduction of world aluminium stocks in the near future leading to a sharp prire recovery was forecast here by Alusuisse Deutschland, the German subsidiary of Schweize-rische Aluminium. The company said its estimate is based on aluminium consumption stabilising at its present level due to expecta-tions of a gradual recovery in

the world economy.

The company said the present low annual production level of around 10m tonnes will be ip-sufficient to fully cover ex-pected demand if these two expectations are fulfilled and stocks will, therefore, have to be reduced. Stocks have currently stabilised at around 3.1m tonnes. slightly lower than the recent

peak of 3.2m. it said. peak of 3.2m. it said.

The close dependence of aluminium consumption on the slate of the world economy means that any economic upturn will be accompanied by an april arreer rate of increase in even larger rate of increase in

rid.
The continued pressure of Dec high raw material costs plus low market prices means that practically all the western world's emelters are showing losses at present, the company Reuter

• AMERICAN MARKETS •

NEW YORK, Oacember 15.

Gold and silver rulined after imancial instruments lound suppon and traded off the day's lows, short-covering followed also on the documption that Tuesday a colling was contrione in relation to gold and silver quotes in other major markots. Copper advanced slightly an short-covering shead of a housing report presumed to be lawourship stopper prompted by EEC setting which more than effect rumours of Soviet inquiries. Choos prices word mitchanged to fractionally lower as adverse weather apposited in be fully discounted in the motiket. College linished sharply fewer on Cantinued liquidation as

SUCAR WORLD "11" 112,000,

125.25 122.05 119.50 117.00 116.30

64.70 64.70

.COTTON 50.000 tha, cents/lb

GOLD 100 froy oz. \$/troy oz

Lelest 438.0 443.5 450.0 456.0 463.5 468.0 478.5 496.5 493.0 503.S 509.0 515.0

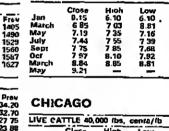
High 65.68 67.20 68.35

High 440.0 445.0 452.0 464.0 870.5 480.0 487.0 493.1 501.0

S15 O

Low 433.5 438.0 445.0 452.5 467.0 474.5 485.0 493.0 500.0

515 O



Prev 134.20 132.70 127.75 123.88 121.13 115.73 117.38 Close 59.05 57.48 66.12 66.12 59.12 58.10 High 59.12 57.40 58.15 60.12 59.30 66.20 LIVE HDOS 30,000 lbs. cents/lb Closs High Low

MAIZE 5,000 by min. cents/56 lb

Prev 431.7 436.8 443 5 457.5 464 9 472.5 480 3 488.4 696.6 504.8 513.2 SDYABEANS 5,000 bu min. cents/ 60 lb bushel Prev 563.8 572.6 582.2 591.6 592.4 586.0 601.4

HEATING DIL 42,000 U.S. gallens. SDYABEAN MEAL 100 tons. 5/ton Close High Low ORANGE JUICE 15,000 lb. cents/lb Close 124.30 125.50 126.55 127 90 128.50 128 90 128.50 128.70 129 00 129.40 130.00 130.50 130.50 PLATINUM 50 tray ez. \$/tray ez

1138.0 1138.0 1117 0 1048 0 1023.0 1062.0 1022.0 1077.0 1037 0 1093 0 1052.0 1105.0 1078.0 1132 0 1107.0 1160 0 1137 0 1171.0 1171.0 1076 3 1092.0 1108 7 1134.7 1162.7

SOYASEAN OIL 60,000 lbs, cents/tb 15.46 18.57 15.94 17.90 17.62 17.72 17.85 17.90 18.10 16.91 17.27 17.60 17.68 17.75 17.90 18.10 WHEAT 5,000 bu min, cants/60 lb-311.0 331.4 339 2 343.4 352.0 1035 0 367 0 362 0 367.0 1051 8 SPOT PRICES—Chicago loose lard 16.25 1063 0 leamel cents per pound. Handy and 1185 2 Harman bullion eliver 1072.5 (1082.5) 1113 0 cents per lroy ounce. New York Lin 1141.5 555 0.560.0 (655 0.555 0. learmel cents per pound. Handy and Harman bullion eilver 1072.5 (1082.5) cents per troy ownee. New York tin 555 0-560.0 (555.0-557.0) cents per

Prev 347 7 350 2 357.2 364.7 372.2 379.7 388.0 347.0 355.0 362.1 370.6 378.5 388.5 399.0 High 347.0 358.0 365.0 371.0 378.5 388.5 388.0 Low 347.0 345.0 352.0 360.0 375.5 388.0 394.0 consumption of the metal, it SILVER 5.000 Way oz. conts/Iray oa

Jan March Mey Jely Sapt Nov Jan Merch

Companies and Markets	WORLD STOC	K MARKEI			7000
Clerk Equip 28 ½ - 01. Ad. Pac. Tea.	1296 - Marian Marian 2017 Ve Series Power and 44-48 - 1	I.S. STOCK prices went into a tail- Val	Total	le Y20 to 11,350. Assume the Y20 to Y366. Hitsehi Y9 to Y756 the sectors caution about the	Year ended October 31: Hong Kong
ASA	28 \	ritical 1,000 mark for the first time a two and a half weeks as Wall street grew increasingly pessimistic about the economic outlook. The Dow Jones closing level of land	larket weakened over a broad to the first in active early dealings, Petroving the Toronto Composite years down 12.8 at 1.845.5 at mid-start volume of 3.14m shares.	Brue Chip price levels 180 re shift in interest to time city issues, with Minsul and chemical advancing Y28 to and Japan Synthetic re Y47. to Y263.	The recent rallying trend con- ued at the outset yesterday, d prices held firm for most the morning. Profitables, sever, set is towards the end the short Wednesday sersion, young narrow mixed move- ents on balance after moderate
All Pred & Cheim	2744	er 23, when it reached 990.94, and epresented a fall on the day of 6.74. Declines overwhelmed advances 1,60 four to one and volume shamped to come to one to o	tips were lower, Golds losing but fo 5 to 3.477.9, Oil and Gas. 25.6 on the 2,6257 and Metals 10.3 to 2,6257 and Imperial Bank lenadian Imperial Bank Ce	in merge with Shell Seklyn, act il back to finish only Y3 up at the car at Y308. TMANY at at an arrange fall initially as a second arrange fall initially a	ints on balance after insurates theirly. The Hang Seng index, which is recovered 49.44 in the prior o trading days, was 7.94 higher the 11.00 am calculation, but ished a slight 0.95 days on a day at \$02.85. Turnover on a four exchanges in the half-
Asked Corp. 3176 - 1/4 Control Data 3576 - 46 Holly Supar 3814 - 1/4 Control Data 3576 - 46 Holly Supar 3814 - 1/4 Control Data 25 1/2 481-C-Suphanars 81/4 - 1/4 Corps Adolph 12/4 481-C-Suphanars 1874 - 1/4 Corps Adolph 14/4 482-C-Supar 482-C-Supar 483-C-Supar 483-C-Supar 483-C-Supar 484-C-Supar 485-C-Supar	B39/s -11/s Nelsten (AC) A -88 -3 Salar Practic 351/s -14 129/s -160 8 -17/s -18 274/s -14 NL tradistries 17 / s -34 SW Generalizers 27 -55 29 -29/s Norfolk Seetheru 25 -14/s Syrring Inds -31 / s 213/s -7/s Syrring Inds -33/s -3/s 213/s -7/s Syrring Inds -33/s -3/s 213/s -7/s Syrring Inds -33/s -3/s 213/s -7/s -7/s -3/s -3/s 213/s -7/s -7/s -3/s -3/s 213/s -7/s -7/s -7/s -3/s 213/s -7/s -7/s -7/s -7/s 213/s -7/s -7/s -7/s -7/s	Analysts said a report yestering day that November industrial recording was down 0.4 per cent intumderscored concern that the property of the	d that investors are now look- for signs of an economic Hower overy rather than just lower above erest rates. Northern Telecom fell 27 to mid-signs for the control of the	weighed down the market. day ver, shares tended to finish the the day's worst. The Com- pank index, calculated at the ession and reflecting the lows, was down 8.2 at 743.9. me	s four extensions in the following sension on sension of the following expectations of a cut in cut interest rates tomorrow.
Am. Carr	11 \(\) - 1 Pulsp State Pv	there has been no visible upturn in the economy despite lower interest rates." Michael Metz, of Oppenheimer and Co. said. Blue Chip stocks were particularly weak, signalling heavy of institutional selling. Analysis	deflecting disappointment over Rise- Wall Street fall overnight Did 3 price the U.S. Discount Rate, the Tokyo market lost some its recently gained ground. Sto	pted by the U.S. Discount The Commerciant declined as 130 to DM 132.60, Destined as 140 to DM 274 and Dresday 70 on The DM 144.39.	ney added that institutions re- min beyons to reduce their gh cash positions before the ar-end. However, the setback will Street on Tuesday used investors to move more untionally and take some orbits.
Am. Hater's	\$\frac{91}{2} - \text{ Hosto bads ADB}	lead of IBM and ATT, two of Breithe most popular institutional Shainvestments. IBM was off 1 to 8903 in heavy por trading, reflecting Wall Street's disappointment that the combination of the said o	di-taking concentrated in wearence Chips. Also casting a trical adow over the market was the to D h level of margin buying 1.30.4 Likes itions.	s. Siemens; after receding. 252:20, closed only DM off on balance at DM 253.70. wise in Motors, Daimler was y a net DM 1 down at DM in 0 after a day's low of DM Co	Australia Markets put on a generally sier performance yesterday as vestors' hopes were dashed by the overnight fall on Wall Street pacern about the domestic conomy continued to undermine
Austrate 16da. 23 2½ Distinguam 3094 1½ 16d. Harvestur Auchter Hordig 5534 7½ Billion 3094 1½ 1st. Harvestur Auchter Hordig 5534 7½ Billion 3094 1½ 1st. Harvestur Aught Count Aught Count Archer Owinits 18½ 15 15 15 15 15 15 15 15 15 15 15 15 15	27-94	ra idehesii ieedvhadin Ellasi raise the dividend at their meet- ing on Tuesday. ATT fell 11 to but \$601, also in heavy trading, after reporting lower three-months earnings. American Express was very To active and dropped 21 to \$581.	reigners appareinty results appareinty regain-hunting for low-priced mestic Industry issues. The Nikkei-Dow Jones Average to lead of the session of the sess	st sectors displayed a bias rationer levels after a busy to me with the Indicators de in mee index shedding 1.2 w low Declines outscorne ties by to to one in the French O	e Industrials sector. The All Ordinaries index, after thing 6.0 on Tuesday, aned 2.1 477A. The All Industrials dex alipped 2.7 to a new 1,982 wif 683.4, while Metals and ingrals, shed 5.4 to 482.3 and it and 63s 2.5 to 430.9.
Achimed GS	ASV4	covered 1 to S31 in neavy partrading. The stock dropped 6 to Tuesday, reflecting Wall Street's distillusionment with the home video game husiness. Technology stocks suffered Management with the Management of the stock of the	red with Tuesday's 320m. Light Electricals, Computer alkers and Precision Instruents led the decline, while some oriors, Steels and Shipbuilders are also easier. Chemicals,	mess on Wall Street on day had sapped investors usiasm. A report by the serioration of the business of the in France in the sext few	Gold shares surrendered 2 good deal of Tuesday's strong se, deposited by the sharp vernight settark in the Bullios rice. Trading was thin, how-
Beldwin Utal 34	12 \(\frac{1}{2} \)	Technology \$1 to \$211. Digital Equipment 11 to \$97 and Honey-	Sony fell Y140 to Y3,760, TOK sible sectronics Y200 to Y5,320, back sectronics Y200 to Y4,470, Cit mon Y50 to Y1,200, Mintsushita to F	for the Paris Bourse set to to the Mediterrance fell FFr 13 al Fr 514 despite announcing a William Australia Price +	eelers commented, with inves- ors cautions of taking positions bead of what is for many a long seekend. JAPAN (Continues) or Dec. 15 Yen
Beart No. Brown 38 Variety 29 Variet	18 to - Va Philips Set II 18 Va - V2 Transfers 23 Va - Va 19 - Va Philips Fet - 58 Va - Va Transfers 55 Va - Va 13 Va - Va Transfers 26 Va - Va 13 Va - Va Transfers 26 Va - Va 13 Va - Va Transfers - Va Transfers - Va	Classing Prices Dec. 1 Dec. 2	200 200	-5.2 ANZ Group 3.46 3.5 3.	O.01 Conshiroks
16 16 16 16 16 16 16 16	773/4 - 1/2 Popt Prof g	Bit Meanters 25% - 4% Personde D	273. 46 Ned Mid Bank 187 246.4 + 50 Ned Lloyd 103 246.4 + 50 Ocs 0 rinter 177 Ocs 1151.2 + 4 1151.2	1.5 -1.5 Borgarville 1.83	MEC 1, 260 - 20 - A sta Clec Works, 546 - 2 - A sta Clec Works, 546 - 2 - A sta Corp. 503 - 3 - A stable Elect. 503 - 3 - A stable Elect. 449 - 2 - A stable Elect. 449 - 2 - A stable Elect. 5775 - 8 - A stable Elect. 718 + 5 - Mitsuicoli, 389 + 5
Brockway Glass	19% +34 Puls 5 Indiana 147% + 187 1776 1776 1776 1877 1878 18	0. C. forest	15 Price of or Viking Re	1.8: -2.2 Committee	+0.85 Whom Caments 1.77
Burnoght 37% 26% Figs-1/98 18% 48 Mapolia Corp 18%	18 \(\	Die Tirk	428 +5 421 -1 790 -14 its 1,470 -14 its 335 -35 its 476 -4 its 250	0e + 0r Jimbatera (Scrp 0.22 Land Lester 0.32 Land 1.00 3.10 3.50 5 + 2 Mayor Niches 2.85 1.50 1.00 1.00 1.00 1.00 1.00 1.00 1.0	Nepson N
Canal Rendolph 113-Ve 4-Ve EBCD 39-Ve Ve Merco	Add	Dense Petroleum	788 +12	100 100	Reconstruction Reco
Control SW 1674 Va Gan Instrument 48171 748 Media Sent 1572 Va Gan Instrument 48171 748 Media Sent 1572 Va Gan Motors 58 1 Media Sent 17744 Va Gan Motors 5874 Va Media Strat Va Gan Signal 4474 Va Media Strat Va	811/7 - 74 Repel Butch 333 - 14 Weltinster 22774 - 175 581/4 - 2/4 Repharman 31374 - Weltinster CO 15/4 - 74 581/4 - 2/4 Repharman 41 1/4 - 74 127/4 - 5/8 Ryan Homes 41 1/4 - 74 284 + 274 Rephr System 48 Winn-Both Sy 41 1/4 - 76 284 + 274 Rephr System 48 Winn-Both Sy 121/4 - 76 284 + 274 Rephr System 48	Hards Sid Com	1.361 -59 B. 676 -23 Research 793 -3 Research 793 -3 Research 793 -3 Research 793 -11 Research 793 -12 Resea	Routhland Marg. 0.25	-0.81 Sony
Chessical NY	147n - 3h Satism Corp 381% + 31 Venture II 351% - 3h 351% -	Misc. Blackel 2274 - V4 Poctain	## All 118.0 9.2 Morsk Date 10 10 10 10 10 10 10 1	HONG KONG Bec. 25 Price H.K. 5	Telitoka Gil
Indices NEW YORK-DBW JONES 1982 Since Compiler n	Dec. Dec. Dec. Dec. 2982 Low	Please Day Day 11% - Vs 725 - AEG-Yels	NY Sco.Oentral Sco.Dentral Sco.Dentral	55 -3 Chaung Kong	-0.85 Toshibt
Dec Dec 15 14 13 16 8 6 High Low High Low	AUSTRALIA All Ord. (1/1/88) 477.4 479.5 476.5 476.6 595.5 (4/1) 445.2 (8/7) Metal & Minis. (1/1/88) 402.3 407.7 339.1 402.5 438.1 (5/11) 298.8 (8/7) AUSTRIA Credit Aktion (2/1/61) 48.91 48.91 48.55 48.45 56.98 (4/11) 47.51 (29/18)	Repair Oil 71½ + ½ Altianz V	215.7 -0.6 Petroleon 5 109.6 -2.2 Telefonica 6 290.5 -3.5 109.6 -2.2 Telefonica 6 SWEDEN 5 280.5 -3.5 280.5 -3.5 280.5 -3.5 EL. 225 - 1.8	Jardine Math 23.4 New World Dev. 2.6 New World Dev. 2.6 O'Seas Trust Sk. 3.20 Selfs Pag A. 2.5 Selfs Pag A.	Yenuda Fire
Transport 431.58 435.1 444.24 438.52 442.3 5612 (12/11 6/12/27	BELGIUM Belgian &E (\$1/12/65) 181.45 198.94 190.89 59.87 103.69 (22/9) 98.42 (28/1) DENMARK Copenhagen &E (1/1/76) 129.67 117.19 118.86 115.62 128.22 (25/2) 162.31 (13/6)	Shall Can A 20% - Ve Commer:	25e.n%	50 —2 WheelookM*time 2.05 50 +60 57 —1 57 —25	+0.51 Southead Shd 1.77 -0.51 Cold Storage 7.80 +0.52 DBS 8.95 +0.05 Fraser & Newve 6.95 +0.01 Genting 7.51
Trading vol 0183 9838 6314 8643 9932 9743	FRANCE (2AC General (51/12/61) 700.6 102.8 102.8 102.50 102.50 102.50 111.5 (12/6) \$5.5 (12/6) 104.7 (4/1) 104.7 (Welfer (i) fies 1896 - Hooktief Westenst Trans 14 - V- Hookst Hookst Hookst Hookst Hookst	465 +5 Electronic B. 200.8 -0.7 Esseña (Free) 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	April Apri	Inchaspe Shd 2.56 -0.55
STANDARD AND POORS Dec Dec Dec Bec B	HOLLAND ANP-GBS General (1976) 96.5 180.2 90.38 198.30 181.3 (8/12) 84.8 (8/1) ANP-GBS General (1976) 82.5 85.4 82.20 85.50 85.5 (7/12) 88.2 (4/1) HONG KONG HONG KONG Hang Seng Bank (81/17/84 882.65 805.84 777.84 754.40 1445.82 (12/1) 676.26 (2/12)	Dec. 15 Price 4 or Kastund Karstadt Karstadt Karstadt Karstadt KhD Kioekin Kioekin Krupp	199 -3 Sandvik 8 Free) 2 193 -4 Skandle 5 200.5 +2.5 Skar Enskide 2	78 -2 Ameda	+2 UOS 3,78 -0,52
Composite 135.24 137.38 139.95 139.57 148.0 141.82 143.82 102.42 143.02 4.4 (1/6/12)	17ALY Banca Comm (tal.(1972) • 165.71 154.14 166.73 165.02 217,66 (13/6) 147.25 (22/7) JAPAN** JAPAN** JAPAN** 7882.55 7819.62 7865.57 7879.55 177.78 (13/6) 111.32 (17/6)	Interuntali	15	58 -10 Citizen 530 Daiel 627 Daiel 707 Daiwa Bouse 707 Daiwa Bouse 707 Daiwa Bouse 707 Daiwa Bouse 707	-11 Abercom 885 0.8 -11 AE & G 750 40-7 -1 Anglo Am. Cost 25.5 40.5 -20 Anglo Am. Cost 25.5 40.5
Ind tire yield 9te	NORWAY ONO SE (1/1/72) 168.51 111.52 111.57 110.51 180.55 (26/7) 107.51 (38/11) SINGAPORE 187.57 75 75 77 75 77 75 77 75 77 75 75 75 7	BELGIUM/LUXEMSOURG Prousea Rhela W Rosenth Fra. — Siemon.	9 199.5 Dec. 15 Pest Elect 286.3 -1.6 Pest Elect 286.3 -1.6 Pest Elect 278 +1 Pest E	rice ; Fanud 503 rs. Full Bank 2870 Full Firm 2870 Full Fir	+20 Buffeld 9,16 +0.6 CMA layest 7,25 +0.6 -20 De Beert 7,35 -0.5
N.Y.SE ALL COMMOUN	SCHARTS (1980) SOUTH AFRICA Gold (1989) Gold (1989) (UI 810.9 856.5 841.2 810.9 (14·12) 665.5 (8/1) 720.2 725.5 722.8 738.1 (1/12) 607.5 (28·6)	ARBED	199.7 - 1.8 do (Part Gerts) 128.9 + 1.4 Credit Suisse	180	-10 Driefontain 56 -1.58 -2 FS Geduid 56 -1.58 -3 Robin Fleids SA 117 Robin Fleids SA 127 -10 Hechtenia Steal 9.7 -0.2 -15 OK Sazhars 20.35 -10 Proten Hidgs 2.50 -0.8
	Madrid SE (88/12/81) 78.57 79.17 (c) 90.18 207.45 (202) 75.57 (2014) SWEDEN Jacobson & P. (1/1/65) 846.59 847.45 841.74 842.85 851.06 (6:12) 565.28 (29.4) SWITZERLAND SWISS BankCpn.(61/12/68) 279.5 281.0 280.2 277.6 281.4 (9/12) 187.6 (17/8)	Gevaert 1,720 5,600 -50	Hoff-Roche - 1/10 Interfood	7,773 -200 Rbh(C) 298 1,520 -30 Rbh(C) 1130 1,520 -10 Rb-Yokada 1130 890 -10 Nestal 438 5,650 -10 AGCS 2,230 1,175 -26 MAC 550	#20 Rentition 5.86 -0.8 #20 Rentition 7.15 -0.5 -10 Sage 1909 - 5.8 -10 Sage 1909 - 5.
1925 1925	Swiss Bank Cpn. (81/2/81) 273.5 281.0 282.2 277.5 WORLD	Kredietbank	229.4 -4.5 Pirelli	252 -2 4.216 -45 Kabera	Tengnativisets 15 Financial Rand US9.73 (Discount of 175%)
Wednesday Stocks 3.06 p.m. Cheese Stocks 3.08 p.m. Cheese Traded Price on Day	(**) Saturday Dcc 11: Japan Dow 7,852.06. TSE 577.57. Base values of all lodices are 100 except Australia. All Ordinans and Metals- 500 NYSE All Common—50; Standard and Poors—10; and Toronto—1,000; th 500 NYSE All Common—50; Standard and Poors—10; and Toronto—1,000; th 1821 named based on 1973. † Excluding bonds. ‡ 400 Industrials. ‡ 40 Industrials plus 40 Unitsies. 40 Financials and 20 Transports. c Closes u Unavailable.	Persona Selga	94.3 -2.5 Segunostri-Later 47.5 -0.7 Oct -1.42 -0.5 Swiessir. Swiessir. Swiessir. Swiessir. Swiessir. Swiessir. Swiessir. Swies Reinsche - Swies Volkablt. Union Bank. Union Bank. Swies Volkablt. Union Bank. Zurrich ins. 1	250, +5 1.75 - 20 1.75 - 20 1.750 - 100 2.750 - 2.750	this page are se quoted to the and are less traded prices. It produces dend. In Ex here's issue, or Ex legislation.
Wis Per U 991,000 23 - Eous 60-,000	·				

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LONDON STOCK EXCHANGE

Equity markets subdued by setback on Wall Street and OPEC uncertainties—Share index falls 9.9 to 586.6

Pec 31 Jan 13 Jan 14 Jan 24

* Name times "dealings may take glose from 2.30 cm two business days seriler.

London equity markets went inlo reverse yesterday with sentiment initially unsettled by Wall Street's overnight setback. Tuesday's enthusiastic response to the reduction in U.S. Interest rates gove way 10 subdued trading conditions and leading shores drifted lower for most of the day. Longer-dated Government slocks made o relatively sleady showing after an early bout of uncertainty.

Features. Oil sbures remained overshadowed awaiting the Opec meeting and ended on a particularly duli note.

After the calmer mood in money markets op Tuesday, renewed npward pressure on short-term rates unsettled the market which recorded falls extending to 1. In contrast, long-trading and, after showing losses of around 1 in the early dealings, the day of the contrast of the day. Longer-dated Government slocks made o relatively sleady showing after an early bout of uncertainty. bout of uncertainty.

bout of uncertainty.

Trading in equities was extremely slow, potential investment support being stifled to a certain exteol pending the outcome of next Sunday's crucial Opec meeting which should determine whether Saudi Arabia will be able to maintain its determine whether Saudi Arabia will be able to maintain its reference price of \$34 a barrel. Occasionol support emerged for selected leading shares after the initial mork-down, but prices graduolly drifted easier once the demand had been satisfied. Lower opening advices from Wall Street yesterday saw London's downturn continuing in the late dealings.

HIGHS AND LOWS

FINANCIAL TIMES STOCK INDICES

Gold Mines 508,7 590,0 502.3 494,1 496,0 504,4 235.5

PrE Ratio inen (*1..... 11.04 11.50 11.05 11.02, 10.85 11.00 12.59 Total bargains,, 20,706.21,662 22,646 22,380 22,365120,058 15,827

Equity turnover £m. - 189,83 157,51 210,78, 184.11 108,06' 107,4 Equity bargains. - .19,704 18,172 18,510 18,563 16,948 10,404 Shares traded (m)... - .150.6 112.9 151.8 128.2 111.4 80,1

10 are 591.7. 11 om 592.3. Noon 592.4. 1 pm 591.2. 2 pm 588.9. 3 pm 583.6. Beels 100 Govi. Secs. 12/10/25, Fixed Jet. 1928. Industrial 1/7/35. Gold Minna 12/10/56. SE Activity 1974. Latest Index 01-248 9026.

ainco Corpolist'n,

Govt. 8ecs... 86.84 | 61.89 | 127.4 | 43.18 | Git Edged | 15111 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 | 6110 |

Ind. Ord...... 637.4 518.1 637.4 49.4 Gilt-Edged Gilt-Edged (5/1) (22/1)/82) (28/640) Gargains... 196.1 196.0 Gold Mines... 525.0 181.2 059.9 43.5 Equities (14/12) (22/6), (22/6)80) (26/18/71) Bargains... 120.4 120.1 Value................... 559.1 366.4

High | Low | High | Low |

at £127, with Beecham 17 to 345p in sympathy. "First Declara- Last Account Dealings tions Dealings Day Starsmaots generated e fair Dec 13 Dec 29 Dec 30 Jan 10 Dec 31 Jan 13 Jan 14 Jan 24 "New-time " dealings may take Olsee from 2.30 sm two business days

Manson Finance better

an uninspired banking sector, rising 7 to 34p on revived speculative buying. Demand of a similar nature also beiped First National Finance Corporation to harden a peopy to 434p. The major clearers drifted lower with the general trend. Barclays loss 8 to 388p and Midland 4 to 302p. Firm the previous day in sympathy with gilts, Discount Houses receted on light profittaking; Union shed to to 520p and Smith St Aubyn 3 to 40p. Continuing to attract buyers in

9.9 down on the day at 586.6, latter savanced 12 afresh to Fells in the index constituents were relatively modest, but The drinks sector featured cider makers H. P. Bulmer which ing session and ended I lower attracted strong and persistent

dated stocks railled in quiet trading and, after showing losses of around i in the early dealings, generally closed unchanged on halance to hold Tuesday's gains extending to 12.

Measuring the lone, the FT
30-share lodez, up by more than
14 points on Tuesday, reduced
an opening loss of 48 to 41 a
couple of bours later but closed
9.9 down on the day at 586.6
1ster edvanced 12 afresh to

per setting for a net gain of 1? of £1.1 following first-half profits which easily exceeded best market estimates, a bumper dividend and proposed there split. Merrydown Wine also mode noteworthy progress and at 350p in response to the much-better-than-expected interim profits; Telephone Renials put on

noteworthy progress and noteworthy progress and noteworthy after 415p.

Significant movements in Buildinga were usually the result of special situations or news items. Dealings in Instock Johnsen resumed et 90p compared with Theoday's suspendioo price of 80p and the shares touched 94p before settling at 93p following the agreed bid, currently worth just under 96p per share, from Landon Brick, S down at 121p. George Wimpey, the subject of considerable speculative settivity recently on talk that Grove Charity might be prepared to sell its 49.9 per cent stoke in the company, reacted to 114p in early dealingn before rallying utrongly to close 4 dearer on balance at 123p. Elsewhere, McCarthy and Stone encountered profit-taking in the wake of the preliminary results and closed 20 lower at 370p, after 365p, whise Francis Parker, 9t 27p. gave up 4 of the previous day's speculative gain of 9.

The change in sentiment to lower was a sentiment of leaving Wall Street's overnicht.

The change in sentiment following Wall Street's overnight reaction caused ICL, et 344p, to surrender the previous day's gain of 6. Amersham International softened 4 to 48p, as did Hickson and Weich, to 284p. The lower half year profits clipped a couple of pence from British Tar Preducts, to 35p.

re George Carpets.

Cable and Wireless soared to 388p before closing o net 16 up at 380p in response to the much petter-than-expected interim profits; Telephone Renials put on 11 to 142p in sympathy. Despite details of the proposed rights issue and loss incurred for the year, recent speculative favourite favourite lamps. The prospect of defence orders helped Ferranti to put on 2 lamps. The prospect of defence orders helped Ferranti to put on 6 firm 6 to 174p. However, lack of 19, while Plessey shed 8 at 385p end GEC 6 to 200p.

Therefore closing o net 18 up at 389p in response to the more of 19 to 145p on consideration of the profits potential of the company's new potential of the company's new 10 lamps. The prospect of defence orders helped Ferranti to put on 12 lamps. The prospect of defence orders helped ferranti to put on 5 firm 6 to 174p. However, lack of 19, while Plessey shed 8 at 385p end GEC 6 to 200p.

Therefore closing o net 18 up at 389p in response to 12 to 48p on revived did bopes. The chairman'n waraing shout difficult trading conditions continued to unsettle Intasn which the 8 for a two-day drop of 12 to 38p. Other boliday issues gave ground in sympathy. Horizon losing 6 to 172p and Saga 7 to a low for the year of 85p. By pontrast. Owners Abread firmed a penny to 24ip on the fim acquisition of privately-owned Falcon Leisure. Elsewhere in the Interior substitution of privately-owned Falcon Leisure Sector, Nimalo International, at 152p, gave up 18 of the previous day'n jump of 38. The prosposed exponsion of the previous day'n jump of 38. The proposed exponsion of the previous day'n jump of 38. The proposed exponsion of the previous day'n jump of 38. The proposed exponsion of the previous day'n jump of 38. The proposed exponsion of the previous day'n jump of 38. The proposed exponsion of the previous day'n jump of 38. The proposed exponsion of the previous day'n jump of 38. The proposed exponsion of the previous day'n jump of 38. The proposed exponsion of the profits and in the provious day'n jump

The change in sentiment following Wall Street's overnight reaction caused ECL, et 3449, to surrender the previous day's gain of 8. Amersham International softened 4 to 489, as did Hickson and Welch, to 2849. The lower half-year profits clipped a couple of pence from British Tar Preducts, to 36p.

B. Paradise Suspended

Possible repercussions following Tuesday'n appointment of receivers to R. and J. Pulman prompted a suspension of dealings in B. Paradise, in which Fulman sholds just over 30 percent of the equity: dealings in Puradise were suspended at 9p. a fall of 8 so far this week and a sharp decline from tha 1982 peak of 43p, while the company meets its bankers to ascertain the worth of loans guaranteed to the company of Pulman thought the company meets its bankers to ascertain the worth of loans guaranteed to the company of Pulman the worth of loans guaranteed to the company meets its bankers to ascertain the worth of loans guaranteed to the company meets its bankers to ascertain the worth of loans guaranteed to the company meets its bankers to ascertain the worth of loans guaranteed to the company and the company meets its bankers to ascertain the worth of loans guaranteed to the company and the company meets its bankers to ascertain the company and the company meets its bankers to ascertain the worth of loans guaranteed to the company and the company meets its bankers to ascertain the company and the company meets its bankers to ascertain the company and t

NEW HIGHS AND

LOWS FOR 1982 NEW HIGHS (66)

Seel 18, FJ

BUILDINGS (E)
Meyer Int.
Travit & Arneld CHEMICALS MY 570RES 113 ELECTRICALS (4) Highland Elec.

BANKS (1) Abut. Bist. From. Clark (M.) Balmer (M. P.)

Sea. Spc 1982

POREIGN BONDS (11

Carr's Milling INDUSTRIALS (5) IC Inds.

Rowart Naire Mersey Dock Units

**TEXTRES (7)

Grovetali Hamen Tst. 91pc. Cov.

Hambre Life Mother Co. 21

Hambre Life MOTORS (2)

Arrington MOTORS (3)

FAPER (3)

FAPER (3)

FAPER (3)

FAPER (3)

TRUSTS (25)

NEW LOWS (9)

INDUSTRIALS (3)

PROPERTY (1)

SHOES (1)

OPTIONS

Stocks favoured for the call

included Ayop Rubber, GKN, Burmah, Phicom, William Leech, Eglinton, Bowater, Fobel International, Brilish Printing,

ICL, George Wimpey, 600 Group, Japan Assets Trust, Mills and Allen International,

RHP, Arlen Electrical, Kie Oro, Carlion Real Estate, Quest Antomation, UKO and Grove

bell. A put was completed in Chuhb, while a double option

was struck in British Printing.

Paradise (0.1 ENGINEERING (1)

AIM Fenner (J. H.)

Saga Holidays MOTORS (1)

Prop. Sec. lay.

at 485p on disappointment that General Felt Industries of New Jersey had not launched a full-

nharply increased full-year profits and the confident chairman'n statement prompted renewed support of specialist prioters McCorquodale, which advanced 20 for a two-day leap of 43 to 218p, British Printing, helped by aprice activity. option activity, Simed 11 more to 641p, but DRG receled to sporadic profit-taking and at 79p, gave up 3 of the previous day's gain of 8.

Pulman sholds just over 30 per cent of the equity; dealings in Paradise were suspended at 9p. a fall of 8 so far this week and a sharp decline from the 1982 peak of 43p, while the company meets its bankers to ascertain the worth of loans guaranteed to the company by Pullman.

Other secondary Stores failed to generate much interest although seasonal demand lifted

Iovell rose S to 110p; the cash offer, worth 66.4p, from Kirby and West bas closed with 78.1

Per cent acceptances.

Ladbroke e good market recently, eased 3 to 160p, but leaders picked up to overnight recently, eased 3 to 160p, but leaders picked up to overnight levels before encountering fresh offerings to close at the day's offerings to close at the day's stake in the company to 22.54 per cent.

Phormsceutical concerns led of more liberal North Sea offerings to close at the day's offering

industrial leaders. Largely due where, Candecca remained to technical influences, Glazo friendless in the weke of the fell I to £12I and Beecham gave disputed board changes and np 17 to 345p. Fisons declined Sceptre Resources' decision to np 17 to 345p. Fisons declined seek the company and gave up 10 to 368p and Unitever 15 to 745p. A rising market of late oo hopes of an imminent bid from the U.S., Sotheby's plummeted to before closing a oet 25 easier the company and gave up 11 for the company and gave up 11 for two-day drop of 25 to 134p. Among Finaoclats, Robe before closing a oet 25 easier the conditional state of the condit retain its 40 per cent stake in the company and gave up 11 for

Among Financials, Robert Ritchen Taylor touched 166p before nettling a nei 17 to the good at 155p following the encouraging interim statement. London Investment Trust were also wanted and rose 21 to 201p. Textiles again featured Highams, which, despite announcing on Interim definition last Friday, rrf2 3 for a two-day goln of 9 at 6tp; Largs has increosed its holding in the

Jersey had not launched a fullncale offer. Christies gave up 4
In sympathy to 184p. More-thandoubled losses incurred by
Caravans Iolernational left the
others 3 down at 12p, while confirmation, of proposed merger
plans for Mr Asil Nadir'n three
high-flying concerns left Polly
Peck 1; points easier at £25,
Wearwell a penny off at 87p,
after 92p, and Cornell a couple
of pence dearer ot 232p, after
240p. Speculative buying fuelled
by rumours of a large shareholding in the company changing
hands left United Guaraniee 7
better et 18p, after 17p. Reflectcompany to almost tS per cent Golds turn easier

Recently buoyont South African Golds suffered a sharp setback as the downturn in the bullion price roupled with Johannesburg selling ahead of today's South African public holiday prompted

hands left United Guranice 7
better et 15p, after 17p. Reflecting the profits recovery, Redfearm
National Glass rose 10 to 122p,
while Erskine House put on 3
to 48p on revived hid bopes.
The chairman'n warning sbout
difficult trading conditions continued to unsettle Intasnn which
need 8 for a two-dny drop of 12
to 95p. Other boliday issues gave
ground in sympathy, Horizon
losing 8 to 172p and Saga 7 to
a low for the year of 85p. By
contrast, Owners Abread firmed
a penny to 24p on the £im
acquisition of privately-owned
Falcon Leisure. Elsewhere in the
Leisure 5ector, Nimalo International, at 152p, gave up 18 of
the previous day'n jump of 38.
The nervised widespreod and often oubstantial
losses throughout the list.
The sharemarket made 9
ateady stort but quickly ron into
the overseas selling following the
fall in buillon. The offerings
buill up over the lunrhtime
period and reached its height
during the stermoon with little
or no U.S. aupport forthcoming.
Consequently, closing prices
were easily the day'a lowest ond
the Gold Mines index retreated
the Gold Mines index retreated
to 3435.25 an ounce.
Among the lop performers in
dropped fil to £65, while Hortebeest fell £1; to £50; and Doornfonted a ferminal prices
for a two-day ground in the sharemarket made 9
ateady stort but quickly ron into
the overseas selling following the
fall in buillon. The offerings
buill up over the lunrhtime
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fall in buillon.

Consequently, closing prices were easily the day's lowest and the Gold Mines index retreated 14.3 to 508.7. Bullion lost \$12.75 to \$435.25 on ounce.

Among the lop performers in recent weeks, Randfontein dropped filt to £65, while Hortebeest fell £1\(\frac{1}{2}\) to £40\(\frac{1}{2}\) and Doorn-fentets almost a full point to £14\(\frac{1}{2}\). The morginol East Rand Proprietary, which on Monday passed the final dividend, dipped £1\(\frac{1}{2}\) to £11\(\frac{1}{2}\).

The necor provided a firm feature in Consolidated Modderfontein, which moved up 10 to a year's bigh of 223p on renewed speculative huying.

South African Financials mirrored the losses in Golds. De Beers were finally 12 cheaper al 346, "Amgold" \(\frac{1}{2}\) off at £59\(\frac{1}{2}\) and Gold Fields of South Africa \(\frac{1}{2}\) down at £54.

down at £54.

The speculative Australians remained out of favour, particularly recent bigh-fiver Acora Securities which dropped 7 more 10 28p—a two-day fall of 12

An exceptionally subdued session in Traded Options saw 883 contracts dooe—the lowest total since early August. Only Electricals attracted a reasonable business with GEC and Racal recording 323 and 115 calls respectively.

RISES AND FALLS YESTERDAY

RECENT ISSUES

	E SE	High:	Low		등 -			Ēģō 	- L-
44	F.P			Areal.TinMinos Nia.lo		. •	.= -		- : <u>-</u> -
475	F.P. 10:t			⊕Bcspak 10p				3,2 9	
90	F.P. 29:10	117 .		- Brevillo Europe 10p 1		٠	24.B	2.2 6	
4100	F.P. 22-4			Sr. Kidney Pot. As 1			.= -		
2 215	108p 22:4			Britoli top.,				1.8 7.	
574	F.D. —			#Canvermoor				2.0 5.	
80	F.Pt2:1t	95 ,	63					1,9 6	
25	F.P		27	T-First Tallers an inveo.			PO'6	2.0 2.	¢ , :8.5
¢150	F.P. 25 11			+Fitch&Co. 10p 2			D4.2	1.5 2.	7. 7.5
55	F.P. 7:1			+Corfunkciskost. 100 t				3.5 2.	
(5e	F.P., 7/1	72	65	-findust'i Fin & Inv CO			UZ.0	2.5 4.	1 11.3
.17				-Inn Leisuro Sp				0.7 2.	
9130				Mcreory Comp Ir 10p I				5.5 1.	
:120	F.P. 30112		25 ,	∰Micro 8us. Sys. 10g €	105	7	52.35	3,4, 1,	6 20,4
£155	F.P. 7:1			-Munford & While 2		: :	b2.5	2.4 t.	7 65,2
1	·F.P.j - i			-NMW CoreOuters 1	50		9	2.6 3.	9 15,9
09	F.P., 1.12	198		÷Pnpple0nceSt'si00 i				_ : 1.	
.93	F.P	165 1	48	Resource Toch. 10p 1	55		.=.		
525	F.P.; -					• 1 ;	DB.C	1.9 4.	210,4
	F.P. 21:12	140 1		&State raFood Pressillo 1				5,6 2.	
1:120	F.P.(&&windon Priv Hos £1 1			- Ta	5.5 1.	
(1210	.F.P. 17/12			5ystomsDesign'rs 180 2					
£350				Technolan SA Fri00 ±				a.o. 5.	
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TO 84	F,P, 12:11	pa.	6a -	-Woodchoster Invs	14		40,10)	4.2 4.	A 2' ,

FIXED INTEREST STOCKS

	Once DT	Ronum	t982	Otock	Cloylog Price C	+01
k	· F.P			Abyood It; Cum. Conv.Red.Prof. 1997	22 p	
n	97.504 £9		6912, 1834	BOC 1216 Una. Ln. 2012-17	2112	
g	99.063 621			Barcloys Bank 12 pctins .Cop. Ln. 2010 Sirminghom 11120c Red. 2012		
h	100 11			Carebridge Water Works 71 Rod Pri 69	- Si-	-112
		24/18		Chester Water 6 4; Rod. Prl. 1927		
ď	45 F.P		94 89	Esplay Tyas 1143 Conv. tins, Ln. 1922	91	-5
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e	199.798 £30	11.	303 273	Scottish Eastorn Inv. Tel 1244 Och. 2012:	29	
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"RIGHTS" OFFERS

price	Am'unt	Roni de	JDC.	19h	Low	Stock	Closing price
4 10 2 t 95 105 625 92 117	F.P.	6:12 26:11 17:12 17:12 20:11 20:12	17/16- 14-1 30/12 32/12	4pm 1pm 182pm 523 20om	12/2 12pm 12pm 12pm 105pm 290 19pm	Abwood 21:P	7 19 -1: 20m 1pm 175pm -2 322 +2 20pm

Requestation date equally last day for dealing line of stamp duty. Fr French French. A Figures based on prospectus estimate. A libridged rate paid or payable on part of capital cover based on dividend on luft capital. A samumod dividend and yield, a ledicated dividend: cover relates to provious dividend. P/E ratio based and yield, a ledicated dividend: cover relates to provious dividend. P/E ratio based on latest security sermiage. If Process the dividend cover besed on prospectus or other afficial estimates for conversion of shares not now ranking for dividend or ranking only for restricted dividends. Fracting price, process unless otherwise indicated. I leased by tender. I Obserd to holders of ordinary chares as a "rights." I leaved by way of capitalisation. If shotorodeced. Il leaved to connection with reorgoslation morges or take-ower. It introduction. I leaved to former preference holders. Mailotmant leaters for luthy-peid), a Provisional or perty-poid allotmant leaters. Market. It Dealings under special Rule. I United Securities Market. It London Listing. I Effective leave price after sario. I formerly deat in under special rule. I Merger bid or reorganization in progress.

ACTIVE STOCKS

Above average	activity v	ras polec	i in the following stocks y	entarday	
Stock	Clesing	Day's	Sieck	Closing	change
Arlen Elsc	304	+ 29	Merlydewn Wine	390 513	+25
Bulmer (H. P.)	350	+ 114	Shell Transport	404 485	-12 -25
Gisao	£12% 93	- 0's	Vaal Reels	1613	- 05 ₀

TUESDAY'S ACTIVE STOCKS

	Doma	a on b	nanica u	ecologi in SE Oil	ICIBI LIST		
	No. of	Tues.	034.8		No. 01	Tars.	Opy's
ock	Changes	closs	change	Stock	changes	Cinse	Chane
ermoor	. 21	105	_	Hanson Trust .	15	252	+17
ures Teth.	21	155	-	Beecham	14	3-5.2	+15
'n (R.&J.)	27	101	- 9	Lon. & Liv Tst.	74	36B	+15
solaiss		330	+ 20	Paladise (8.)	14	10	-11
B Parker .	18	31	+ 9	Vost Roals		F624	+ 0%
lo		170	+ 38	Glaso	13	C13%	+ 0
onteie		£191.	+ 04	Memory Cmptr.		175	- 5
							_

FT-ACTUARIES SHARE INDICES

S.E. ACTIVITY

These Indices are the joint compilation of the Financial Times, the Institute of Actuaries and the Faculty of Actuaries

	EQUITY GROUPS	Wed Dec 15 1982					Dec 14	Mon Dec 15	Fri Dec 10	That Dec 9	Year ago (appear
Fi	& SUB-SECTIONS Figures in parentheses show number of stocks per section		Day's Change	Ext. Earnings Vield % (Marc.)	Gross Div. Yield % 1ACT at 30%	(Net)	Index No.	index No.	tratex No.	Index He.	inter No.
1	CAPITAL GODDS (208)	419.17		9.53	4.09	13.07	422.61	408.05			
2	Building Materials (24)	398.49		10.69	4.72	11.26	3%.04	397.13	307.31		297.72
3	Contracting, Construction (291	726.10		12.26	4.36	9.72	723.50	706.57	702.52		572.78 1718.74
4	Electricals (32)	1425.06	-19	7.39	214	17.35	1654.19	1593.45	1615.0		678.26
5	Engineering, Contractors (101	450.19	_	25.32	4.89	7.94	450.28	444.74 191.08	191.16		187.54
6	Mechanical Engineering (67)	193.87		12.43	8.74	9.85	113.94	13713	139.66		MARZ
8	Metals and Metal Forming (11)	142.45	-0.9	13.93	8.62	8.79	143,77 74.55	73.28	73.35	72.87	91.93
9	Motors (18)	74.15	-0.5 -0.4	9.64	5.89	13.14	354.37	353.59	351.53		364.30
10	Other Industrial Materials (27)	357.94	-2.1	10.38	4.40	1165	40132	396.29	396.66	392.86	254.78
2t	CONSUMER GROUP (202)	399.92 434.79	-0.5	21.12	4.88	11.01	404.90	430.33	45.47	428.10	27151
22	Brewers and Distillers (23)	323.24	-0.7	14.28	-541	8.20	325.55	325.78	322.58	329.45	268.51
25		864.68	+0.6	7.23	2.73	17.37	31.50	849.71	345.27	837.31	538.63
26	Food Retailing 14)	674.53	-4.5	6.60	2.73	19.80	786.56	682.62	675.14	442.79	339.36
27	Leisure (24)	450.13	-9.6	9.46	5.13	13.44	452.72	444.79	442.51	438.73	442
29	Newspapers, Publishing (13)	603.12	+1.5	10.58	5.37	11.85	593.95	302.29	9217	583.73	401,49
32	Packaging and Paper 1141	145.03	-1.2	15.10	7.71	7.83	146.74	142.40	1/225	143.14	127.92
33 34	Stores (46)	377.47	-0.6	8.01	3.63	26.51	379.87	372.53	373.24	364.23	236.63
	Textiles (23)	170.20	-0.4	13.96	630	8.67	170.96	157.20	178.36	176.13	151,22
35	Tobaccos (3)	446 31	-0.7	19.58	6.18	5.65	451.45	40116	40134	64.42	252.14
36 39	Other Consumer (14)	322.48	+61	2.01	4.80	_	322.28	322.32	323.06	32461	243.85
41	OTHER GROUPS (76)	283.44	-0.2	12.25	5.90	9.84	201.00	271.63	278.22	275.47	224,75
42	Chemicals (15)	373.25	-14	13.09	6.50	9.13	378.55	371_A7	373.51	368.01	286.86
44	Office Equipment (41	84.54	+12	19.17	19.27	6.41	85.25	\$1.61	B.H.	83.46	115.57
45	Shipping and Transport (13)	503.87	-0.5	17.19	8.45	6.95	516.26	491.72	474.44	497.18	504.01
46	Miscellaneous (44)	404.12	+0.8	9.85	4.44	22.40	466.65	391.25	302.64	20119	296.34
20	INDUSTRIAL GROUP (486)	391.01	-0.9	10.32	4.48	11.85	394.50	325.40	384.65	302,46	257.78
		708.44	-2.9	17.88	8.16	250	729.76	725.%	751.58	697.90	73.83
51	OIIS (141	417.31	-12	11.42	5.61	20.61	402.33	413.78	415,15	465.80	325.47
59	FINANCIAL EROUP (119)	266.38	-02	-	6.61		257.00	262.98	253.44	243,25	251.53
5t		283.82	-12	35.53	8.50	3.07	207.27	283.42	286.80	245.97	272.70
52	Banks(6)	274.33	-17	~~	8.47	_	273.98	269.30	279.27	258.66	246,28
3	Olscount Houses 19)	358.92	+ii		5.33		355.17	350.61	349.24	353.11	250,52
[کا	Insurance I Life) 19)	172.87	+61	_ 1	8.23	_	102.77	159.89	179.30	17L6	156.65
6	Insurance (Composite) (10)	472.90	+0.9	23.59	5.76	18.22	468.55	457.94	456.86	446.54	409.25
7	Insurance Brokers (7)	151.56	+0.3		5.74		151.06	150.07	258.51	357.40	151.56
8	Merchant Banks (12)		-00	6.28	4.37	21.24	40.46	396.86	396.42	393.91	64,25
9	Property (51)	399.37		15.10	630	7.86	182.99	178.32	172.50	177.34	173.11
0	Other Financial (15)	183.50	+03	_			150.92	345.52	343.79	343.08	234.12
2		351.40	+0.1		4.78	24.82	234.85	224.82	225.73	223.28	263 10
n I	Mining Finance (4)	227.14	-16	9.04		18.86	374.24	368.73	365.56	3654	497.57
n	Overseas Traders (181	378.38	-11	12.67	8.64	TB'00	77.07			379.73	
9	ALL-SHARE INDEX (750)	377.92	-0.9	-	5.32	- 1	20121	3/478 (2/3./4	3/14/3	2607.3
7	West Supposed to the supposed							_		-	
						CF 680	~	1	Wed	Tues	Year

	FI	XED	INTE	REST				AVERAGE GROSS REDEMPTION YIELDS	Wed Dec 15	Des 14	(approx.)
_	PRICE INDICES	Wed Dec 15	Day's change %	Tues Dec 14	nd adj.	nd add. 1962 to date.	2 2 3	British Government Low 5 years	9.99 12.42 12.78	8.94 10.45 18.77	13.42
1 2 3	Syears	116.52 126.81 133.19 137.10	-0.34 +6.02 -0.00	216.92 126.94 133.16 137.10	A.14	11.46 12.52 13.48 13.57	4 5 6 7 8 9	Medium 5 years	11.17	11.50 11.60 11.60 11.80 11.80 11.80 11.80	15.86 15.22 15.89 16.05 15.48 11.27
5	All Stocks	125.36	-0.16	125.56	0.06	12.44	II	Dels & Loans 5 years	12.39 12.39	12.59 12.44	16.52 26.43
6	Detectors and Louis	180.25 76.44	+8.43	99.82 76.37			13	25 years	12.39	12.44	16.33 16.40

TFlux yield. Highs and lows record, base dates, values and constituent changes are published in Saturday issues. A 8st of constituents is available from the Publishers, The Financial Times, Bracken House, Cambon Street, London, EC4P 48Y, price 15p, by post 28p.

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Nature of Business

JOBS COLUMN

Harrowing query • Executive directors' pay

BY MICHAEL DIXON

sive "public" schools, usually cite Eion and Winchester as the two schools responsible. Observing this seal at the ing this, a reader who must be this afternoon. nametesy has raised a question.

Although he has for years been recruiting graduates for industry and commerce, he has

nnt go into industry and com-

2.—Those who ograduate beforehand. the would be interested to hear of other Jobs Column readers' views on that hypothesis. And so would I. But in the meantime I'd like to suggest that there is at least one other possible explanation.

It is that such graduate Old Harrovians as go into industry and commerce, do not enter by way of the common channels of recruitment. It may be that, to a greater extent than even Old Etonians or Wykehamists, Harrovians are responsible for the legend of the company chief who at 9.30 one morning seni for his general manager and introduced him to a silkily groomed young man.

Finance

PROTESTS that the United the everyday work we do. Don't Kingdom is still effectively run spare him, heenuse I'm deterby an elite from certain exclu-mined that he should have a thorough grounding. Then bring him back here in time to lak his seal at the hoard meeling

Modest reality

WHATEVER legend might sav never come across a graduale job-candidate who had gone to Harrow. Accordingly, he suspects that:

1.—Enter Old Harrovians do however, the money rewards of directors jobs in the generality of British industry and commerce do not seem overwhelmingly attractive these days. The ingly attractive tuese days. The table alougside gives some re-sults of a survey made in Sep-lember and just published by the Reward organisation in conjunction with the Institute of Directors.

My figures retate only to fully executive board members— managing directors and alt other types of subordinate direc-for taken together—broken down according to the size of their company's turnover. Anyone wanting detailed informa-tion on the survey's findings should contact Bill Couldrey of Reward (1 Mill Street, Stone, Staffs ST15 8BA; tetephone 0785 8145541.

As well as basic salaries, the table shows total rewards including bonuses and so oo received in money. If the people in each calegory were ranked by their rewards the lower hy their rewards, the lower quartite would be the pay of

Eurobond Executives-

International Corporate

Following expansion of the International Corporate

Finance Department of J. Henry Schroder Wagg & Co. Limited in the last few years, we are looking for a number of executives who will join the existing team

responsible for International issues and other inter-

national corporate finance transactions. In the first

eleven months of 1982 the Schroder Group has managed 82 Issues raising in excess of the equivalent of

The successful candidates are likely to be aged

between 24 and 27, will work closely with a Director

or a senior executive of the Bank, and will either

have a good university degree, professional qualification, or equivalent. Knowledge of a foreign language would be a considerable advantage. Candi-

dates should have a minimum of two years' experi-

ence in corporate finance, ideally with an emphasis

on capital markets, and should have gained a good

understanding of their structure and operation. The

The remuneration package, inclusive of an attractive

range of benefits, is competitive and the job offers

considerable potential for development while career

prospects within the International Corporate Finance

Department and within the Bank and Group generally

are excellent. Applications in writing with tull curricu-

lum vitae should be made, quoting reference FT1, to:

work will involve a fair degree of travel.

r- Size of organisation	Lower	quartile	Me	dian	Upper	Upper quartie	
3 by turnover ເຊື່ ເຂື່	Basic salary	Total money rewards	Basic salary	Total money rewards	Basic salary	Total money reward	
	£	£	£	£	£	£	
UNDER £1M Managing director	10,500	12,000	13,500	14,500	19,000 14,000	20,450 14,960	
v. Other directors	9,600	10,000	11,500	12,050	14,000	17,,,	
of £1M - £3M Y Managing director Other directors	17,000 12,500	18, 706 13,500	19,750 15,000	20,600 16,575	22,500 18,250	24,500 20,000	
£4M - £10M Managing director Other directors	19,000 14,000	20,000 15,219	21,600 16,333	24,100 17,572	2 <i>6,000</i> 19,100	28,496 20,500	
£11M - £25M Managing director Other directors	27,250 15,500	25,000 · 16,085	26,500 18,125	27,500 19,833	30,242 20,875	34,480 22,950	
£26M - £75M - y Managing director Cother directors	22,375 17,200	24,000 18,000	29,250 20,000	32,424 21,020	34,563 24,000	37,500 28,250	
t £75M UPWAROS Managing director Other directors	25.963 20,000	29.838 21,718	35,843 25,000	40,000 28,000	45,000 33,250	52,000 34,688	
f ALL ORGANISATIONS Managing director Other directors	15,000 13,850	17,000 14,625	20,000 17,200	22,000 18,143	25,200 21,000	28,597 23,000	

Since the figures tell their own story, all I will add is that the Jonathan Wren survey in the summer showed the overage

and the upper quartile that of cash pay, senior City bankers the one a quarter of the way down. lend to have perks often valued at half as much again.

Chief dealer

£30,000 plus usual City perks "This gentleman has just quartite would be the pay of non-variable cash rewards are being offered by Dudley Edjoined the company." the chief the person a quarter of the way among general managers of munds of Robert Half Personaway and rub his nose in all that of the one in the middle £56,250. And oo lop of their market in London the foreign-

Executive-

exchange services of a 50-year-old internalional bank, changing from representative office to full branch status liere.

Candidates who have success fully managed as well as prac-tised trading should cootact Mr Edmunds at Lee House, London Watt. London EC2Y SAS: Tel. 01-606 6771.

Being unable to name his

International Corporate

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of J. Henry Schroder Wagg & Co. Limited to work closely with a Director of the Bank in this expanding

The successful candidate is likely to be aged

between 24 and 27, should have some knowlege of

International investment markets, preferably of both

equities and property, and be capable of taking a

global view of Investment alternatives. He/she may have had three or four years experience with a U.K. stockbroker or merchant bank and will have a good

university degree or professional qualification. Ideally, the successful candidate will have experi-

ence of using computers and an aptitude for

The remuneration package, inclusive of an attractive

range of benefits, is competitive and the job offers

considerable potential for development while career

prospects within the International Corporate Finance

Department and within the Bank and Group generally are excellent. Applications in writing with full curricu-

lum vitae should be made, quoting reference FT2, te:

client, he guarantees confidential treatment to applicants who

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The column now starts its Christmas break. Compliments of the season. See you again, I bope, on January 6.

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Mr. John R. Lambert

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for Thomas Tilling Sir Aribur Norman has been appointed deputy chairman of THOMAS TILLING. Sir Aribur has been a nin executive director of Tilling since 1979. He

Deputy chairman

APPOINTMENTS

director of Tilling since 1979. He is charman of De La Rue and a director of Sun Lafe Assurance, Whithread and SKF (UK) Sir Arthur's appointment as deputy chairman is in preparatinn for the fortheating retirement of SIr Robert Taylor, the present chairman, who has reached the age of Til years. It is the intention of the Tilling board that Sir Arthur should be appointed chairman of Tilling when Sir Robert retires after the company's annual meeting in May.

APPOINTMENTS

Mr Bohin Schlee, the company secretary of JUHN SWIRE AND SONS, the London-based parent company of the Source Group, is retiring on Describer 31. Mr Michael Ferguson has been appointed company series and the present position as group financial mutroller.

Mr R, A. Wilson, managing director of The Nestle Company, has been elected the next president of the FOOD MANUFACTURERS FEDERATION from January 1. Sir James Cleminson, having served as president for the past three years, ends his term of office on December 31.

Mr. J. D. Sillavan, a non-executive director of LEHBI SILIAVAN GRUIP, has been appointed chalrman of the board in place of Mr. A. E. Whitwurth who remains as unmaging direc-tor, Mr. B. H. Stewart has been appointed in the board as a non-executive director. Mr. D. T. Huber has been appointed secre-tary of the company.

BPCC has made the following appointments at MACD(INALD AND COMPANY 1PUR-LISHERS) from January J. Mr. Tim Hely-Hatehlason is appointed managing director. He tay marketing director. Mr. Terry Mella is appointed sales and marketing director. He was previously sales director of Sphere Buoks and export consultant to Thumsun Books. Mr. Edmand Fisher, managing director, will remain with the company as editorial consultant to Putura (Macdonald's paperback imprint). Mr. Ron Hobbs, a director of BPCE, has main hoard responsibility for Mardonald and Company (Publishers).

Mr Michael J. Fearev has hern appulated construction division ritief executive and a director of FORD AND WESTON 1101.D. INGS. He had been managing director of Ford and Weston

(South West), He becomes execu-tive chairman of this company and of Derby construction com-pany. Ford and Weston, and chairman of Ford and Weston (Contract Services), and it. It. Robinson and Son, two other group companies. Mr Braham Long has become annuaging director of Ford and Weston (South Wester and Mr Robert (South West; and Mr Robert Barton, director and general Barton, director and general manager of Ford and Wrston

Mr Tim Myers, former managing director of W. S. Uraw-ford, has been appointed general manager (marketing) designate of the ALLIANCE BUILDING SOCIETY, Hove, from damary 4. Mr Myers was previously with liners Gross, and Fonty, Gene and Belding. LUCAS INDUSTRIES has appointed Mr R. Brown a director from January 1. He was appointed a director of Joseph

appointed a director of Joseph Lucas Limited, the operating loard of the group, and a mem-ber of the Lucas executive in 1977. In August 1979 he was appointed director and general manager of Lucas Electrical. Mr J. A. Nuble has been appropried secretary from January 1. He was director and company general manager of Lucas Industrial Sestems, then

Lucas Industrial Systems, then registered as SMEC Limited. Mr Noble relimpuishes his executive appointment and responsibilities with Lucas Industrial Systems on assuming his new group appuintment on January 1 and also joins the board of Lucas Group Services. Groun Services.

Mr II. D. Sputtismoote relin-quishes his responsibilities as secretary. Lines industries, nn his retirement un December 31.

Mr Leon Revdon, rhairman, and Sir John Lidhury are both retiring from the heard of the VERGORDON DISTILLERS at the end of the year. Mr II. Charles Craig, managing directions for since joining the company in 1967, is to surveed Mr Roydon as chalrman and Dr Chris Greig, an executive member of the heart, will become managing director. Roth approximents take effect un January 1

FIDELITY RADIO has appointed Mr Sirven Dickman clinirman and managing director. These positions were held by his lather. Mr Jark Dickman, until his death on December 2. Mr Sieven Dickman was previously deputy managing director.

Mr George Ashion has been INVE elected chairman of the COUN-financ CIL OF THE MACHINE TOOL Group

INDUSTRY RESEABCH ASSOCIATION in succession in Mr W. R. Vaughan who has held the post for the past eight years. Mr G. A. Ashton is the technical director of the Tl Group, and chairman of Tl Machine Tools. The Council is the governing lindy for MTIRA, which is the UK rentre for machine tool tech-

The Home Secretary has ap-pointed by Julin Kilging, at pre-sent director of coordination at the World Health Organisation, to be director of PRISON MEDI-CAL SERVICES from October 1. He succeeds Dr Bonald Ingrey-Senn who took over as acting DPMS on the restenation of Dr James Orr in July last year. Dr Ingrey-Senn is due to retire by the end of next year

SCOTTISH EQUITABLE LIFE ASSURANCE SIGHETY has ap-nointed Mr David A. Berridge general manager of the Society. Mr Berridge was assistant ceneral manager (finance) re-summable for the measurement persponsible for the investment part-

Mr John Seat has been ap-granted a director of LONDON GALVANIZERS, part of the Joseph Ash and Son organisa-tiop, from January 1. Mr Seat is works manager of London Galvanizers and Blackwall Gal-vanizers.

Mr David Cooper has been announced director of the METAL PACKAGING MANUFACTURERS ASSOCIATION Formerly marketing director of the Serek Group's industrial valve division, he takes up his new post on January 1.

Mr Stephen Casey, who joined the company in 1970, has been annointed a director of FAIR-VIEW ESTATES (HUUSING).

NEI has appointed Mr K. G. H. Binning director, government rerations from January 4 Mr Bin-ning will be responsible to Mr C. R. Thompsun, rhairman of NEI International, and will join the logard at that company, the international marketing opera-tion of NEI.

SONOCO UK has appointed Mr Alee Civerley, Mr Ambrew Grinberg and Mr W. A. (Bill)

VIUNG ENTERPRISE has appointed a new chairman. Sir Bavil Checketts, fintner Enuerry to file Duke of Edinburgh and Private Secretary to the Prince of Wales. Since 1979 he has been a director of various componies, including ESI Phe Landon, and a non-eventible director of several subsulary companies of Brilish Electric Traction. He succeeds Dr. Frank Taylor who has resigned for health reasons YOUNG ENTERPRISE has

Mr David M. Anterson has been appointed a director of THE FLEMING ENTERPRISE INVESTMENT TRUST. He is financial director of Alistin Reed

CONTRACTS

£2.8m tunnel work for Mowlem

main rontract wnrih F2.8m to repair the lining in the centre section of Blisworth tunpel, on the Grand Union canal in Northamptonshire, is canal in Northamptonshire, is one of the largest contracts awarded by Brilish Waterways Board, and has been wan by JOHN MOWLEN AND CD. About 1,000 yards of brick lining, the renire third of the 13 mile tunnel, will be replaced with precast segmental concrete units. Bisworth tunnel, on the perinchal waterway rutile here. principal waterway rutite he-tween London and the Midlands has been closed to traffic since the autumn of 1960 and is ex-peried in be re-opened in about two years time.

DEGRESIONT LAING has won an export contract worth nearly fin to slipply and instal mechanical and electrical equipment al Kornns Treatment Works in Cyprus. The works are part in Cyprus. The works are part of a project starting soon to provide water fur Nicosia and for irrigation in the Vasilikus and Pendaskinns Valleys. The contract was awarded by the Water Development Department of the Ministry of Agriculture and Natural Besources in Cyprus. The plant, which will feed from a dam reservair, is designed to produce 32,000 cm. designed to produce 32,000 cu metres/day of treated water. A wash-water recovery system, chemical dosing equipment and studge thickening facilities are also installing all the electrics, leading the domestic supply including the domestic supply, around the plant area. The plant area in the summer of 1986.

At the same time as the in-auguration of the satellite earth station last month, the Nepal Telecommunication Corporation formally opened its first auto-matic later service with a matic telex service with a System 4660 summed by PLESSEY CONTROLS under a contract valued at about £750,000.

Export prefers worth over 1600,000 have leen wan by the measurement and inspection group of FERRANTI for its advanced Bridge range of insudinate measuring markines. The machines are used in

RACING BY DOMINIC WIGAN

CONTRARY TO expectatons and to what the form honk had promised. Little Owl made shurt work of Bregawp in their match for yesterday's Tommy Whittle Chare at Haydork.

Sent on from the penultimate fence, the 1981 Chelienham Gold Cup winner held a small lead over the lung odds-on Bregawn at the line fence. From there, the winner asserted himself in speciacular style, drawing well clear of the runner-up, who had jumped to the right at a number

Little Owl is still available at

industry to check the dimensions of machined or manufactured parts. Orders have been received from Australia, Asia and Europe. Several orders have also been received for the smaller cantilever-type CMM manufactured by Ferranti.

The Albert Mann division of WELLMAN MECHANICAL ENGINEERING has beened a contract from Albuminum contract from Aliminium Bahrain for the supply of a Loma-Mann automated hilled saw complete with ancillary equipment worth over 1500,000.

Four orders worth in the region of \$200,000 for the GABLE computer aided design system for architects have been received by QUEST GENESY: New customers are Cunningham Glass Partnership, Glasgow: Leicester Polyterhnie: the Scott Suther-land School of Architecture, Aberdeen: and the Warley Chilege of Technology, Suteth-wick GARUE (Graphical Aids with GARLE I Graphical Aids for Building Layouts and Evaluation! has been developed specifically for architectural work. It uses the eninputer to increase the production rate of final drawings and to improve the quality of final design.

Bedfurd dealer. Mohammed Falch Al-Hajari Establishment of Alkubhar, Saudi Arahia, has placed a 10-vehicle order warth 1360,000 for a new extra-heavyduity BEDFORD 60-tonne grasseumhination-weight 6 x 4 tractor. Further development of Bedford's inner wheelbase rigid. ford's longer wheelbase rigid models for other heavy-haulage applications will fellow, includ-ing a rigid 6 x 4 topper chassis for 18 on metres rapacity budy-work flor at least 32-tonne gowt.

PHB WESERRUTTE, the West German group specialising in mining and mechanical handling equipment, has win another hig nider from the Middle East. The new deal, wirth about DM 45m fff1.4m1 is for construction of a order has been given to PHB Weserhutte by the Kuwaii

7-1 for the 1983 Chellenham Gold Cup with the Tole but Ladbroke was more impressed and has trimmed his odds to 4.1. An abundance of stamina is a prerequisite for today's three-and-a-half-mile Burnley Chase on the rain-solden Lancashire enurse. With this in mind I enurse. With this in mind I have fittle hesitation in going for Peter Scot.

The Cural Welsh Grand

National winner of three seasons back and a faller at Becher's when quietly fancied for the last Sun-sponsored Grand National, Peter Scot Is thought in be right hack to his best, following two mucl-needed outings. narmally tost and accurate jumping should have the highly-

rated but thexperienced Talon in trouble some way out. Peter Easterby rarely trains

E. FLETCHER BUILDERS [MIDLANDS], the Stoke-based building arm of London and bullding arm of London and Northern Group, has been awarded contracts worth more than E2m for housing projects in the Midlands. In contracts worth 1750,000 it will construct 20 burgalows for the Metropolitan Boromeh of Wolverhampton and 15 dats for Normid Housing Necessiation in the Multerhampton.

ion area. in two contracts valued at around f1.5m Fletchers will con-struct 58 low-cost houses in a joint remute build for sale some remark minin for safe scheme in conjunction with the Metropolitan Romatch of Wol-cerhampton and rarry nut a design and build shettered housing scheme for the North British Housing Association at Barnage. Manchester. The Barnage, Manchester, The scheme consists of 28 flats logether with office and laundry

A contract worth about £400,000 for the supply of heating and ventilating equipment for the top side of Britait's Beatrice B platform has been won by OSV FARRICATIONS, manufacturing division of Ofshore Ventilation. division of Offshore Ventilation. Equipment supplied by OSV includes lonvers, grilles, moisture climinators, fire dampers, control dampers, heaters, air handling units and air conditioning packages.

Under the Department of Industry's pilot project scheme.
FUTURE TECHNOLOGY
SYNTEMS has been awarded
£250,000 in develop an electronic
office for Leicestershire Constabulary headquarters and its
regional offices. The initial proposal, in be injudemented early
in 1983, is for stand-alone
systems based on Future Technology Systems' Series 88 workstations. Seventeen systems will
be installed over the next two enimplete storage and handling he installed over the next two system for solidified sulphur near years, eventually providing a the port of Shuaiba, Kuwail. The full network capability accessyears, eventually providing a full network capability access-ing a rentral information store.

> hurdlers for himself and it will he interesting in see how his Jamestino shapes up in the Hindley Green Nuvices Hurdle. The Bustino four-year-old looks the type to make a name for himself over the numor obstacles but at this stage of his career he will be hard-pressed in cope with either Same Smith or Comptonly.

> At today's other meeting. Southwell, both Latte American and Nugat link well worth an interest. Latin American has progressed steadily of late and

is the day's liest bet. HAYDOCK 1.00—Commonty 2.30—Peter Scot 3.30—Rare Gift* SOUTHWELL

.45-Latin American ***

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BUSINESS LAW

Three bad doctrines

BY A. H. HERMANN, Legal Correspondent

SAD TO SAY, but neither the to do so, then the High Court House of Lords nor the Court judge would do it. He added of Appeal have contributed lingation and arbitration are much to seasonel high spirits but two branches of the same by decisions handed down on industry, one public, the other December 2 in fact I find posimuch to seasonel high spirits by decisions handed down on December 2. In fact, I find positively depressing both the Lords' decision' giving the green light to arbitrations which have been more dead than alive for a decade, and the Court of Appeal's decision that a state trader may be released from its obligation by the mere word from its government. Nor am I likely to be alone. Both decisions are oad for business, and particularly

the best illuminated by leaving the judgments aside and getting down to fundamentals. One of these is e rule that claims do not last forever. There are time limits during which you must assert them. If necessary by taking the debtor to court and, if you do not, you have lost our claim.

It follows also that litigation cannot be allowed to drag on indefinitely. Those who do not pursue their actions with proper diligence can have them smuck off by the judge for want of prosecution. It stands to reason that the party which started the action in order to get its money or other satisfaction—not the defendant—is responsible for keeping it moving.

for keeping it moving.

The fundamental principles of law and the roles of the to the fault or default of either two parties are no different in arbitration. For that reason when, faced with inordinate and inexcusable delays in the Bremer Valkan caset, Mr Justice Donaldson, as be then was, held thet the arbitrator could and should the parties should the arbitrator could and should stop such arbitrations for want of prosecution, and if he fælled the fault or default of either the nipunction. The lower courts should learn to respect better the Law arrest of a Cuban ship connected with the now decided trators and the parties and tried to prevent Buropean companies from fulling them.

Dealing earliers with the arrest of a Cuban ship connected with the now decided trators and the parties and tried to prevent Buropean companies from fulling them.

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Dealing earliers with the arrest of a cuban ship connected with the now decided trators and the parties are the Law arrest of a Cuban ship connected with the now decided trators and the parties and tried to prevent Buropean companies from fulling them.

Dealing earliers with the arrest of a specific with the now decided trators and tried to prevent Buropean companies from fulling them.

Dealing earliers with the arrest of a cuban ship connected with the now decided trators and tried to prevent Buropean companies from fulling them.

Dealing earliers with the arrest of a cuban ship connected with the now decided trators and tried to prevent Buropean companies from fulling them.

Dealing earliers and tried to prevent Buropean companies from fulling them.

Confirming Dousidson, the appeal judges held unaramously that a High Court judge could intervene if the defending party had been harassed by arbitral proceedings which could not have lead to a fair trial; but they did not think that the arbitrator had the power to do the same. Unfortunately, the of delays if he did nothing to stop them. Lords Scarman and Fraser of Tullybelton dissented.

This majority decision was received with dismay by the lower courts and by the business community and some business community and some High Court judges said the Court of Appeal tried to get round the decision. One of these cases was that of Hannah Blumenthal, in which both Lord Justice Staughton and the majority of the Court of Appeal held that the arbitral agreement had been frustrated by the delay of one or both parties. delay of one or both parties. .

the Law Lords, in the long term speed up London arbitration. The other regretable judg-ment was delivered by Lord Justice Ackner on behalf of the

trading organisation could get out of its contract obligations because its government no longer considered the fulfilment of the contract to be politically destrable.

in February 1980; that commericial contracts which could not
have been concluded had
friendly relations not existed
between the exporting and importing country, were frustrated
if the regime of one of these
countries had been replaced by
another of which the other
government disapproved. This
ruling transposes into the realm
of politics the doctrine that the
intention of the parties, at the
time e contract is concluded, is
of overriding importance for its
interpretation. Such extension
of this perfectly sound doctrine
offers to state traders the possi-

. The doctrine that commercial contracts can be cancelled for foreign policy reasons with retroactive, and extraterritorial The claimants appealed, and effect, is contrary to the legal the Law Lords (who this time policy of the UK and of other included neither Lord Scarman major countries of Western nor Lord Fraser of Tullybelton) Europe. It was successfully held unanimously that a con-opposed when the U.S. prohitizate could be frustrated only bited the Siberian pipeline con-

to protect private traders against politically inspired b eaches or wrongs that the re-strictive theory of sovereign inmunity allowed states to be brought before a municipal court." Three Law Lords Appeal Court including Stephen brought before a municipal son and Shaw, LiJ. In a dispute court." Three Law Lords arising out of a suger contract (though not Lord Wilberforce) between Cuba and Chile, the held on that occasion that Cuba main issue was whether a state could be responsible for the conversion of sugar loaded for Chile and diverted on the high seas to Vietnam.

However, Mr Justice Musull's judgment was now confirmed by the Court of Appeal. In view of what the Lords said on the same ment. Nor am I likely to be alone. Both decisions are bad in the same. Unfortunately, the desirable.

In business, and particularly bad for London as e centre of international arbitration.

The "Sleeping Dogs" litigation now embraces several cases where the defending party in an arbitration asked that the arbitration should be stopped because a fair arbitral entry and was no longer possible. The courts disagreed between the arbitrator to produce the state of delays if he did not into parties to have been concluded had to be changed, so as to party in an arbitration should be stopped because a fair arbitral could not stopped because a fair arbitral could ask the arbitrator to produced the courts disagreed between the plaintiff by peremptory if the regime of one of these case are not as emanation or a be best illuminated by leaving of delays if he did nothing to another of which the other department of the Court of Appeal. In view of the same the Law Lords. In a monutental judgment what the Lords said on the same day in Baumenthal day in Baumenthal should be thought it best to let the text-book on this and related not be brought about by the fault or default of the parties, the could not appear the arbitration proceed-friendly relations not existed the state trader. It is porting countries had been replaced by are not an emanation or a department of the Cuban state that the defendant who (which could well serve as a about frustration that it could not issues) Mr Justice Mustil held, fault or default of the parties, the could not in the cuban case the could not into trade the could not into the brought about by the fault or default of the parties, the could not countries which could not the cuban that the defendant who (which could well serve as a about frustration—that it could not into trade the fault or default of the parties about the cuban that the could not the state trader. It is porting countries had been replaced by the could not the same the could not the cuban that the countries about the countries abou accepted," said Lord Justice Ackner, "that they (Cubazuear) are not an emanation or a department of the Cuban state and that they have an independent legal existence." He relied on the House of Lords decision in Cannilson v Rolimpers—a case in which Poland failed to deliver sugar to British and deliver sugar to British and other western importers. The Czarnikow doctrine enebles the offers to state traders the possibility of avoiding commercial tract in the hope of making
obligations under the pretext of profits, to get out of the conpolitical necessity. it, claiming political motives or economic necessity. If puts it in the fortunate position of being able to pose as force majeure when reneging on its oblication.

All three doctrines laid down in Hannoh Blumenthal, Cabaru-car and Rolimpez are maso-chistic, bad for Business end contrary to the public interest. They should be removed by Parliament.

Parliament.

Past Wilson and Co. v. Parrennegersi Hannah Blumenthal, FT CLR
8-12-32.
[Emmess Exportadors de Asucar v. Industrie Azucarese Nacional FT CLR
7-12-82.
Bremer Vulkan v. South India Ship-ping [1861] A C. 900: i Congreso [1961] 3 WLR 328.
Czarakow c. Rolumpex [1879] A.C.
251.

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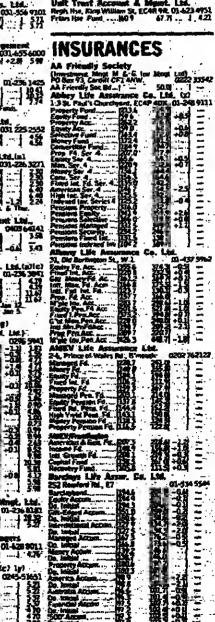
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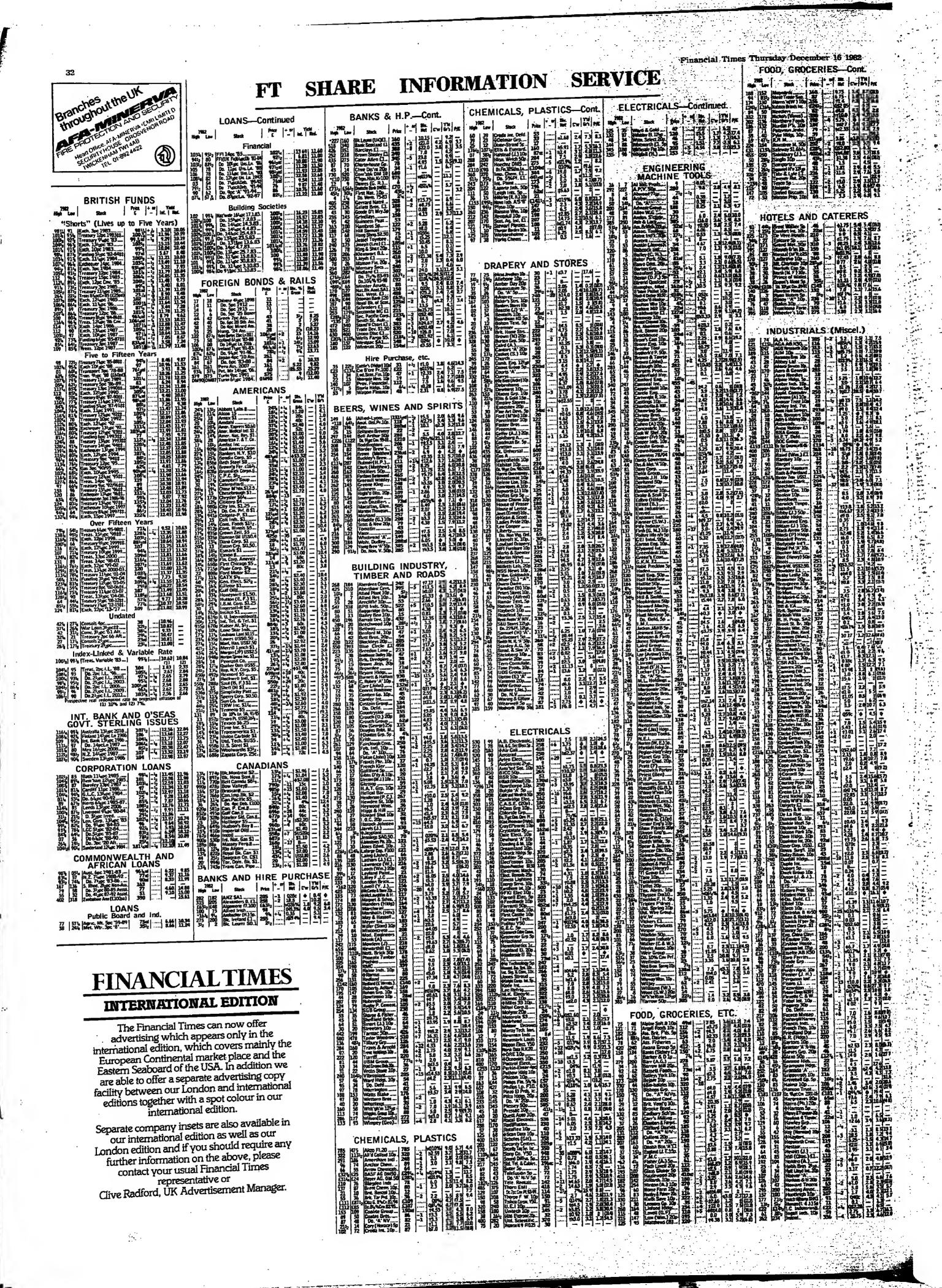












Stack Price - Met Cw Eri on R0.50c..... 200 025c 18.3 6.5 kie Col. 751 19 025c 12.0 0.0 Cp: \$800.24 19 0.0

Dollar shows marginal improvement

Sterling traded sleadily, gain-ing a little against European currencies while easing slightly in dollar terms.

DOLLAR - Trade weighted index (Bank of England) 121.3 against 118.9 olx munths ago. A change of emphasis towards enange of emphasis towards fundamentals such as rising trade and budget deficits has pushed the dollar down recently but despite these and recent but despite these and recent interest rale reductions, the dollar's weaker Irend may be slowed by the proximity of Christmas and the year end—The dollar closed at DM 2.4500 against the D-mark up from DM 2.4410 and SwFr 2.0875 from SwFr 2.0825, it was also firmer against the yen at Y244.75 compared with Y244.50 and FFr 6.9475 from FFr 6.9175.

STERLING — Trading range against the dollar in 1982 is 1.9255 to 1.5837. November average 1.6338. Trade weighted index 85.8 against 85.8 at noon and 85.9

OTHER CURRENCIES

Argemtina Paso. 73,824-78,384 45,480-45,480 Austria.

Brazil Cruzeiro. 383.72 394,72 943,64-244.86 Beiglum .

Brazil Cruzeiro. 386.64 8.82 5.84 8.84.80 Beiglum .

Brazil Cruzeiro. 386.64 8.85 Beiglum .

Brazil Cruzeiro. 386.67 8.87 Beiglum .

Brazil Cruzeiro. 386.72 8.44.80 984.80 Beiglum .

Brazil Cruzeiro. 388.72 394.72 Beiglum .

Brazil Cruzeiro. 388.72 394.72 943,64-244.86 Beiglum .

Brazil Cruzeiro. 388.72 394.72 943,64-24.86 Beiglum .

Brazil Cruzeiro. 388.72 394.72 943,64-24.86 Beiglum .

Brazil Cruzeiro. 388.74 94.72 94.40 94.40 94.40 94.40 94.40 94.40 94.40 94.40 94.

The dollar was a little firmer in currency markets yesterday in generally featureless trading.

Euro-dollar rates were marginally higher in a market confined in its volume by the usual run up to Christmas.

With 85.9 on Tuesday and 91.4 six SwFr 3.3650. It was also higher sterling slipped to DM 3.9570. The French franc was against the French franc of DM 3.9670. The French franc was against the general was against the yen on fears of a slipped a little against the yen of the Judger improved to DM 3.9585 while the Dutch guilder improved to DM 3.9585.

Sterling remains ago. Sterling remains against the French franc of DM 3.9670. The French franc was also lower the general weakness of the dollar bave helped the pound recover from near an all time low against the U.S. unit however Sterling opened at \$1.6160-1.6170 against the dollar and touched a best level of \$1.6180 before coming back in the afternoon as the dollar improved, to touch a low of \$1.6100. It closed

to Y384.75 from Y385.0.

D.MARK—Trading range against the dollar in 1982 is 2,5940 to 2,2410. November average 2,5536. Trade weighted index 127.9 against 125.7 six mooths ago. The D-mark is strong, helped by an improving halance of payments position and confidence in the Government's economic policy. It has benefited receally from the weakness of austerity measures to counier a week economy and large budget.

touch a low of \$1.6100. It closed the dollar and sterling—The serious. Against the D-mark it points. Against the D-mark it rose to DM 3.9525 from DM The dollar fell to DM 2.4453 from DM 2.4710 in quiet tradiog while

EMS EUROPEAN CURRENCY UNIT RATES

CURRENCYMOVEMENTS

85.8 121.9.9 94.0 83.5 197.9 147.6 118.7 73.9 53.0 140.0

Based on trede weighted changes from Washington egreament Occamber 1971.

	ECU cenimi rates	Currency amounts against ECU December 15	% change from central rete	% change adjusted for divergence	Oivergence
Igian Franc nish Krone rman O-Mark nnch Franc tch Guilder ii Punt	44.8704	45,3572	+0.88	+1.27	±1.5501
	8.23400	6.15041	-1.02	-0.51	±1.5430
	2.33379	2.31271	-0.90	-0.39	±1.0888
	8.61387	5.55810	-0.64	-0.33	±1.3940
	2.57971	2.54688	-1.27	-0.76	±1.5004
	0.691011	0.692957	+0.28	+0.78	±1.6691
	1350.27	1332.91	-1.29	-1.29	±4.1369

is 50.21 to 38.12. November average 48.6282. The Belgian franc has fallen sharply against the stronger members of the EMS this year, prompting the Government to Introduce austerity measures to counter a weak economy and large budget deficit.—The Belgian National Book spent the equivalent of BFr 19.1bn last week to defend the Belgian franc according to figures released yesterday. This was the largest weekly amount for seven months and left for seven months and left Belgium's foreign currency reserves at a 21 year low. Howreserves at a 2½ year low. However spart from the usual speculative switch ahead of the weekend and any pussible EMS realignment, the franc's position has been exacerbated by a sleaddly improving Dutch guilder. At yesterday's fixing the guilder improved tn BFr 17.8175 from BFr 17.8115 and compared with on upper limit of BFr 17.8285.

CURRENCY RATES

* CS/SOR rete for Dec 14 1.34619

p.a. months,
1.30 0.41-0.36 pm
9.06 1.85-1.70 pm
-1.02 0.31-0.34 dle 3.47 2.35-2.27 pm
-7.61 62-70 dis
-7.98 15-16-46s
2.96 2.00-1.95 pm
-32.25 400-1050 dis
-8.30 2.50-300 dis
-15.29 49-52 dis
-4.15 7.30-7.80 dis
-95.12 201-22 dis

THE DOLLAR SPOT AND FORWARD THE POUND SPOT AND FORWARD 1.30 0.41-0.36 cm 0.95
0.48 0.06pm-0.02d 0.06
4.82 5\(^{+}_{+}\$\) pm -0.02d 0.06
4.82 5\(^{+}_{+}\$\) pm -4.88
-5.42 75-85 dis -4.13
-9.00 29\(^{+}_{+}\$\) 32\(^{+}_{+}\$\) dis -8.89
-4.66 1.03-1.33dis -8.09
4.17 4\(^{+}_{+}\$\) 37\(^{+}_{+}\$\) m -4.17
-18.74 606-1505dis -23.37
-24.92 435-595dis -14.89
-14.20 27-3-80 dis -13.43
-3.15 8\(^{+}_{+}\$\) 10 dis -3.28
-14.20 31-34 dis -11.61
-1.63 5\(^{+}_{+}\$\) 5\(^{+}_{+}\$\) dis -18.61
-1.63 5\(^{+}_{+}\$\) 5\(^{+}_{+}\$\) dis -18.61
-1.63 5\(^{+}_{+}\$\) 5\(^{+}_{+}\$\) dis -18.61
-1.63 5\(^{+}_{+}\$\) 5\(^{+}_{+}\$\) pm -4.03
-6.68 5\(^{+}_{+}\$\) 5\(^{+}_{+}\$\) pm -5.38 Dec 15 spread

Uk† 1.6100-1.5180 1.6

Ireland1 1.3605-1.3675 1.3

Canada 1.2365-1.2385 1.2

Nethind, 2.6860-2.7030 2.7

Seignum 47.85-81.12

Oanmerk 9.5875-8.4550 9.6

W. Car, 2.4395-2.4575 2.4

Portugal 128.55-128.10 128

Spain 128.55-128.10 128

Intly 1.410-1.415 1.4

Norway 7.0850-7.0800 7.0

Franca 8.9200-8.9556 6.9

Swedsar 7.3870-7.4720 7.4

Japan 244.16-245-20 244

Austra 17.172-172.6 17.3

Switz. 2.0780-2.0935 2.0

It UK and Iraland are quellscounts apply to this Close One month

1.3619-1.5125 0.20-0.15c pm

1.3605-1.3620 0.74-0.64c pm

2.7000-2.7020 0.82-0.74c pm

48.08-48.10 0.82-0.74c pm

98.200-8.6250 5-65-0re dis

92.00-94.00 150-38bc dis

1.28.85-128.95 0.110c dis

1.413-1.414 17-18 lire dis 0.13-0.03c pm 2-13-c pm 30-40c dls 84-12'spre dle 0.39-0.53p dis 13-13-f pm 220-250c dis 165-460c dis 24-30 irre dis 12',-14'sc dis 12',-14'sc dis 14-2ore dis 1-2-1.05y pm 10's-8'sgro pm 6.9860-8.9500 81-91-e dia -4.15 7.30-7.80dis -15.12 201-22 dia -15 scounts apply to the U.S. dollar and not to the beginn rate is for convenible france. Financial

| Austria. | 27.65.87.35 | 36.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.65 | 37.

EXCHANGE CROSS RATES

						_ ·· _ · -				
Dec. 15	Pound St'rling	U.S. Dollar	Deutschom'l	k JapaneseYon	FrenchFranc	Swiss Franc	Outch Guld'	Italian Lira	Canada Dollar	Belgian Franc
Pound Sterling U.S. Dollar	0,630	1.612	3,9\$3 2,452	394.8 244.8	11,19 6,945	3,368 2,069	4.355 3.702	2278. 1418.	1,995	77,55 48.11
Deutschemark Japanese Yen 1,000	0.253 2.533	0,40B 4,084	10.01	98.87 100C.	2.632 28,38	0,852 . 8,531	1.102 11.03	578.3 5771	0,505 5,053	19.62 196,5
French Franc 10 Swiss Franc	0.893 0.297	1.440 0.479	3.531 1.174	352.8 117.2	10. 3.384	3,009	3,890 1,293	2035. 676.5	1.782 0.592	59.27 23.05
Outch Builder	0,230 0,438	0,370 0,708	0.908 1.735	90,64 173,3	2,571 4,914	- 0.773 1.478	1,912	52% 1 1000.	0,458 0,876	17.81 34.04
Canadian Dollar Selgian Franc 100	0.501 1,269	0.808 2.078	1.992 5.097	197.9 509.0	5.613 14.44	1,688 4,542	2,184 5,616	1148. 2337.	2,579	38.88 100,

MONEY MARKETS =

UK rates slightly firmer

The Bank gave further assistance in the afternoon of fishing to the reflection of the control of experienced at the moment. The Baok of England gave assistance matching its forecast although funds were slow to find their way into the market. Overnight interbank money opened at 103-11 per cent and eased to 101 per cent before coming back to 11 per cent. Rates eased to 8 per cent later in the day but late balances may have been more expensive with liquidity remaining tight.

expensive with liquidity remaining tight.

The Bank forecast a chorage of around £650m with factors affecting the market including hills maluring in official hands and a net take up of Treasury bills —£451m and Exchequer transactions—£10m There was also an and Exchequer transactions
—£10m. There was also an increase in the note circulation of £180m. The Bank gave assistance in the morning of £19m comprising purchases of £10m of eligible bank bills in band 1 (up to 14 days), £301m in haud 2. (15.33 days) and £79m in hand 3 (34.83 days) all at 10 per cent. In hand 4 (64.91 days) it bought £62m of local authority bills and £67m of eligible hank bills (64.84 days) also all at 10 per cent.

LONDON MONEY RATES

0sc. 15 1982	6terling Certificate of deposit	interbank	Local Authority deposits	Local Auth. negotiable bonne	Finance House Caposits	Company Deposits		Treasury	Eligible Sank Bifis 4	Fine Trade Bills o
Overnight		a-11				10:107a	9-10to	_	_	
2 days notice	· -	l – .	10½-105g	1	-	-	-	i —	i — i	~
7 days or	_			l ~ ¦		-	_	<u></u>	I I	~
7 days notice	_	10-4-11	1013-105g	: ~ /	_	1107g-12	10-104	· -	, —··/	-
One manth	10:2-10:4	103-107a	1056-1034	1136-11	107a	11	10	101k	10%	1012
Two months		10 ap 10 3	101	1114-10%	10%	1 11 1	952-10	10.2	101	1012 20%
Three months.		10 x 10 m	105-105e	11-105a	1054	107a	912-10	103	104-1018	100
		104.10	1014-1012	104-10	1012] . == 1			912	10%
Nine monthe	101.101g	105a-105a '		1058-1014	104	1 - 1	_	_		~
One year		10 a 10 a	1019-1034	ا ما 1059-10	10%) J			i - !	~
TWO VECTS.			1054-1076			ı — i	:	_	_	

ECCO Fised Rate Esport Finance Scheme IV Average Rate for Interest period November 3 to Occambar 7 1982 (inclusive) 9.510 per cent.

Local sulhorities and finance houses seven days' nouce, others seven days fixed. Long-term local authority mortgage rates normally three years 11-11-per cent. PBank bill retas in table are duying rates for prime Oapers. Suying rate for four-month bank bills 10-10-12 per cent. Iour months Imde bills 10's per cent.

Approximate selling rate for one month Treasury bills 92-10 per cent; two months 93-10 per cent and three months 93-12 per cent. Appreximate selling rate for one month benk bills 10-10-12 per cent; two months 10-10-12 per cent and three months 10-10-12 per cent; two months 10-10-12 per cent and three months 10-10-12 per cent; one month inde bills 10-10-12 per cent; two months 10-10-12 per cent and three months 10-10-12 per cent. cent and three months 10-10-12 gar cent: one month trade 6ills 10-12 ger cent: two months 10-12 per cent and three months 10-10-12 per cent finance houses Base Raise (quélished by the Finance Houses Association) 10 per cent from Occamber 1 1982. London stad Scortien Clearing Sank Raiss for landing 10-10-12 per cent. London Clearing Occasit Raiss for sums at seven days notes 8t-1 per cent.

Traisury Bille: Average tender rates of discount 10-1071 per cent. Certificates of Tas Occasit (Series 9). Occasits of E100,000 and over held under one month 10-2 per cent; one-three-month 10-2 per cent: three-12-months 10-2 per cent. Under 100,000 to ger cent from Occamber 3. Occasito held under Series 3-6 10-2 ger cent. The rate for all deposits willbdyawn for cash 8 per cent.

INTEREST RATES

EURO-CURRENCY INTEREST RATES (Market closing rates)

Osc. 15	Short	7 days notice	Month	Months	Six months	Year Onto
iterling	10%; 10% 94; 9 10 11 5½ 558 14.1% 55; 5% 15 19 174; 20	1058 1018 874-818 10-11 556 534 116-135 534-576 18-22 1942 2310	10% 10% 10% 10% 10% 10% 10% 10% 10% 10%	101e 105e 836 95e 103e 105e 57a 6 51: 47k 614 63e 211e 221e 233e 24 /g	10 m 1012 958 973 1058 1078 6, 6,1 4 418 014 659 21 22 2258 2559	10% 101 6% 101 6% 6% 4 4 4 101 201 22 22
ele. Franc Conv Fin	151 ₂ t41 ₃ 121 ₄ 123 ₄ 07 ₈ 71 ₉ 171 ₂ 18 87 ₆ 9	14 18 12 4 12 1 ₂ 71 ₈ 74 17 1 ₈ 19 8 ₁ 9 ₁	16.17% 121, 123, 1 7.5-7, 1 1712-18 914-94	1414 1514 1214 1919 075 7.1 1914 1914 956 919	13½-14½ 19½-12% 6½-7 18¾-19½ 9½	18-13-1 12-6 12-5 67-7 171-18 91-10

FT LONDON INTERBANK FIXING

11,00 a.m. DECEMBER 15 0 months U.S. dollars 3 months U.S. dollars Offer 9 15:15 bid 97:16

The fixing rates are the authmetic means, rounded to the nearest one-stateenth, of the bid and official tates for \$10m quoted by the market to her reference banks at 11 am each working day. The banks are National Westminster Sank, 9ank of Tokyo. Occische Bonk, Banque Nationale de Pans and Morgan Guaranty Trust.

MONEY RATES **NEW YORK**

GERMANY

SWITZERLAND Oiscount rate Overnight rate ...

NETHERLANDS Olscount rate S CERTIFICATES OF DEPOSIT

LONG TERM EURO \$

SDR LINKED DEPOSITS One month 10² -10² 10² 1

ECU LINKED DEPOSITS

Quiet trading

raie. With dealers cutting positions and squaring off for the rose on the opening of Chicago level at 1,028 against 1.505 on the level by a little shortcovering to finish at 90.55 for March unchanged from the opening but down from Tuesday's figure of 90.61.

A hackmand focture to the

Trading volume fell away in the Loodon International Financial Futures Exchange yesterday as euphoris evaporated after the latest cut in the U.S. discount showing a slight rise in the cast. market, short sterling contracts were marked down from Tuesday pushtions and squaring off for the year end. lots traded in the on initial selling before recovering to make the first points lower in the March opened at 90.25 and slipped to contract in quiet trading and 90.12 before recovering to 90.17 continued to trade lower on from 90.34 or Tuesday. In this light selling to reach a low of slightly more energetic 90.46 around mid-morning. Prices volume stayed above the 1.000. from 90.34 on Tuesday. In this clightly more energetic sector volume stayed above the 1.000 level at 1,028 against 1.505 on

A background feature to the easing slightly on the day in market appeared to be the ever line with falls in the cash increasing yield curve on U.S. market.

LONDON CHICAGO 3-MONTH EURODOLLAR 31m points of 100% U.S. TREASURY BONDS (CBT) 8% \$100,000 32nds of 100% Dec 76-20
March 75-27
June 75-11
Sept 74-28
Dec 74-16
March 74-08
Sept 74-08
Sept 74-08
June 74-08
June 74-08
June 74-01
June U.S. TREASURY
points of 100% Volume 887 (1.801) Previous day's open int. 1,642 (1.831) ... 3-MONTH STERLING OPPOSIT 6250,000 points of 700% Latest High Low Prey-92.42 92.43 92.26 52.34 92.19 92.25 22.03 92.17 91.67 91.68 91.49 51.9 91.77 91.88 91.01 91.11 90.78 90.78 90.63 30.70 90.40 90.44 90.32 90.39 90.20 90.21 90.20 50.20 1.026 (1.505) s day's open 5nt. 2,567 (2.057) 20-YEAR 12% NOTIONAL CILT 250,000 32nds of 100% Dec 91.40 91.41 91.32 91.43 Mrch 91.05 91.63 91.63 91.43 91.40 91.50 91. STERLING £25,000 Ss per @ Previous day's open int. 538 (482) DEUTSCHE MARKS DM 25,000. \$ per STERLING (IMM) Se per C 1.6065 1.6115 1.6000 1.6100 1.8050 1.8120 1.6100 1.8120 - 1.6120 - 1.5120 Latest 98-18 67-14 66-27 66-11 86-00 65-22 65-14 65-09 JAPANESE YEN Y12.5m \$ per Y100 Juna Sept Dec March June Sept March 0.4106 0.4104 0.4105 0.4220 Volume 12 (28)

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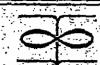
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Financial Times Thursday December 16 1982

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NOTICE IS MEREBY GIVEN that the creditors of the above-manual Company, which is being voluntarily wound on the programment of their delta or claims, and the nemes and addresses of their Solicitors (if sey), to the understance of Fairfas House, Fulwood Place.

London WCIV 6DW, the Liquidator, or the said Company, and, if so required by notice in writing from the said Liquidator, or the said Company, and, if so required by notice in writing from the said Liquidator, are personally or by their Solicitors, are come in ond oroug their delta new personal the behalf of the specified in such notice, or middle delta of the programment of the

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U.S. \$30,000,000 Prevince of Quebec 74% Debentures

due 15-1-1973/88 Debéntures covering USS1,000,000 have been purchased on the market to satisfy the Purchase Fund due 15.1.1983

SVERIGES INVESTERINGS BANK AB vedish Investment Best Limited U.S.\$15,000,000 71% Bonds 1987/1988 S. G. WARRUNG & CO. LTD. numbers of Bones due 15th January, 1983 for a monimal value of U.S.1.500.000 as cases met by perchases to be market, amount of the market, 1985 and 1 30. Gresham Street. London ECZP ZEB. 16th December, 1982

PERSONAL



714 STERLING: OEUTSCHE MARK BONDS 1979.1965 16.250.000 nor Sonds will remain the tith January.

27.50 20.00 29.00

29.09 29.00 20.00

20.00 20.00

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FINANCIAL TIMES SURVEY

Although life has been a great deal smoother than in the industrial West, the country is nevertheless facing internal problems such as the decline of traditional industries

and a slowdown in the growth rate Growth starts to mark time

By CHARLES SMITH, Far East Editor

TO THE AVERAGE hard-pressed Western businessman, as well as to his colleagues in the investment community, Japan appears today to be experiencing an enviable amount of prosperity.

The economy is still cite them as a reason why the growing, although by no yen exchange rate ought to be a means so fast as the Government predicted at the start of 1982. Consumer confidence in the overall state of the confidence in the overall state. prices rose by less than 4 of the economy, however, there per cent in the first nine are signs that things may not months of the year, and the current account of the over- in fact, finds itself in the odd seas balance of payments is position of performing impres-in surplus. (although here sively by the standards of most again the figures are not quite as large as was at one

the labour force and it would might suggest, is the way seem impossible to deny that, actual economic performance by the standards of most other during the year or to has industrial nations, Japan has diverged from what the Governremarkably few problems and a good deal to be grateful for.

The Japanese themselves are not unwilling to admit that life has been a good deal smoother during the past year for almost anyone who lives and works in the great industrial cities of Tokyo, Osaka and Nagaoya, than it probably has been for workers in the industrial west.

Tho "strong fundamentals"
of the Japanese economy seem
to be a matter of pride to
officials at major economic
ministries such as the Ministry
of International. Trade and of International Trade and

other industrial nations yet facing some fairly severe internal problems of its own.

Add to all this a rate of cations that all is not as well unemployment which is still with Japan's economy as marginally below 2.5 per cent of the macroeconomic lidicators the labour force and it would seem impossible to deny that, by the standards of most other divine the macroeconomic performance by the standards of most other divine the macroeconomic performance. ment originally intended.

Japan's economic growth rate.

was more or less on track dur-ing the first half of fiscal year. 1981 (the six months running from April to September of last year) although the main source of expansion turned out to be, not the revival of domestic demand the authorities had forecast, but a continued rapid

industry (as well as to Japanese ; four mopths from its end, has central bankers who frequently shown all the signs of repeat-

Japanese Industry

By the beginning of October officials had revised their guesses down to 3.4 per cent

castere were saying that Japan would be very lucky indeed to escape a second year of less

theorists in the Government and of the world so far as growth the private sector) fust how rates are concerned. fast the country should expect to be able to grow in future.

Exports and what may happen if growth

ally. Slower than expected — if Planning Agency as well as still by no media minimal — some leaders of the ruling Lib-GNP growth has had the effect of creating serious disarray been arguing vigorously since in Japan's domestic finances (by early this year that Japan must causing a series of major tax get back onto a growth track shortfalls in both 1981 and 1982 of at loast four per cent on the that forced the amouncement grounds that anything less than of additional special horrow this would endanger the country. in Japan's domestic finances (by 'early this year that Japan must causing a series of major tax get back onto a growth track shortfalls in both 1981 and 1982 of at loast four per cent on the that forced the amouncement grounds that anything less than of additional "special horrow this would endanger the couning programmes and supple tries, ability to provide relamentary budgets"). It has also tively full employment and to meant that Japanese unemploy—cope with the problems of a ment, though still low by other rapidly ageing society. Japanese countries standards has business leaders, who tend to mentary budgets"). It has also the problems of a meant that Japanese unemployment, though still low by other rapidly ageing society. Japanese countries standards has business leaders, who tend to climbed during the past few be highly sensitive to any months to its highest point in danger of tax increases, have two decades.

The debate about future Japanese growth rates has a direct relevance to the country's trading partners) since it was exports, rather than domestic demand, that served to keep the economy growing during the two years that ended in October 1981. Argument, however, also

One of the more notable is the question of whother Japanese industry has a "structure" which can continuo to support medium to rapid growth over the next few years without A striking feature of the

in raw materials costs brought on by the aecond oil crisis. Another problem which has been haffling Japanese economic planners — and which has certainly had its effect on the way industry hee expanded, or failed to expand, during the past year—is the so-called "flight from goods" thet has showed up in the purchasing habits of Japanese consumers.

to be increasing their expendi-ture on services much fastor than on the products of oven the newest and most glamprous products of the "processing and assembly "industries. By doing so they have increased the need of the latter to seek growth in

to follow from a quick review of

The immediate impact howexperience.

The Government began the employment and the budget throwing good money after bad disbelleved) prediction that the than what seems to have been economy by "unrealistic " region firsts " growth track " psychology. During the last nation which now accounts for year economic and social devel-opment programme published just after the second oil crisis.

By the beginning of October the control of the growth state in the Government and of the world so far as growth of the programs of the world so far as growth of the divorgence between the fast-growing (and heavily papers to day of the generally bleak climate in the divorgence between the fast-growing (and heavily papers growth may have to mark time for e few years while the divorgence between the fast-growing (and heavily papers growth may have to mark time for e few years while the oniside world and the outside world and the fast-growing (and heavily industries that the divorgence between the distribution of the divorgence between the fast-growing (and heavily industries that the divorgence between the distribution of the audio equipment, in an attor to stimulato flagging consul demand. In many, if not all, dustries, expenditure on search and development is a

A final point about Japan industry which ought to ca and hold the attention businessmen and invostors the west is its sharply incre ing interest in international tion. Japanese manufectur havo been aware for some ti of the need to "side-track" tectionism in Europe and U.S. hy making their produ on the spot in western countrinstoad of concentrating sol

on direct exports from Japan More rocently Japenese dustry and the Japanese gove ment, seem to have realised t there may elso be a good de to be said for encouraging coming direct foreign inve and foreign companies thet ta the form of the foreign paner acquiring e stake in almost unknown until the ve recent past but have recent signs of becomi

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JAPANESE INDUSTRY AT A GLANCE PRODUCTION - EXPORTS 1982 1982 1983 1981 1982 1983 Output falls below 100m tons for first time in a decade. No real recovery before latter half of 1983. Industry operating far below capacity. Oll refineries (m kilolitres) 188.6 189.0 177.5 Large production cuts in third quarter of 1982. Increasing internationalistion and a dotermination treach new frontiers of tech Production cuts caused by increased imports and high costs of domestic industry. Gradual loss of competitive edge in world markets. nology may be no substituto for the impetus which drove Japa Exports of home electronic products fall in 1882. Industrial to achieve growth rates of ove 10 per cent for almost tw decades up to the early 1970 and rates of 5 to 6 per cer Exports hit by "voluntary restraint." Experts fall sharply in first half of 1982, recover later. Sharp fall in order book during 1982. during much of the rest of the 1970s, but these two trends Source of 1962 and 1963 production forecasts; Industrial Bank of Japan. Editorial production: Arthur Dawson Design: Philip Hunt Note: The years are spool years, company from April 1 to March 31. would at least seem to indicate

David Moorcroft, Commonwealth Games gold medal winner for 5,000 metres and current world record holder.

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Structural changes bring new problems

EMPLOYMENT JUREK MARTIN

I. ECONOMIC problems are relative. To the outsider, Japan constitutes an employment nirvana: a literate, hard-working and committed labour force. and committed labour force, remarkably unaffected by social and industrial conflict: an intelligently guided policy of labour management, in which government, companies and largely inhouse unions all play a part: house unions all play a part; and a record of economic growth that has ensured that even in that has ensured that even in the present leaner times, unemployment still stands at a fraction under 2.5 per cent: insignificant, even allowing for different measurement of statistirs, by any international yard-stick.

Yet even in paradise, structural changes can occur, and st

omic expansion. This has also persuaded a broad cross-section companies, initially in beavy industry hut now spreading to the previously huoyant export

SHORTAGE OF SKILLED WORKERS

By specific occupation (1980) in percentage terms Blacksmith/forging Reinforcing metal

Concrete frame carpenter 25.8 Pipe filter/plumber 25.5 Dressmaker 23.7 Boilermaker Tinsmith/sheet metal-

wnrker

Structural steelworker Metal patternmaker Instrument assembler/ repairman Source: Japan Institute of

sector, to reduce their hiring of school graduates, to assign some employees to satellite companies In the service sector and even, in some instances, to offer inducement for early retire-

Traditionally, the hirlog of school-leavers had been a cornerstone of corporate employment policy. These were the young men who could he expected to spend a lifetime with one company, being trained in different departments and rising to mid-management levels. sometimes higher. They would be supplemented, of course, by university graduates, many of whom might also be expected to spend a lifetime with one

Yet even in paradise, structural changes can occur, and Japan is no exception. A slower rate of growth, shifts in economic activity, not all the product of the high technology revolution, a rapidly ageing population and a different complexion to the face of the labour force, most notably in the growing participation of women, are combining to present Japan is adjusting, not necessarily it is adjusting, not necessarily voluntarily, to changed employment realistes. University ment realistes. University m participation of women, are combining to present Japan with a new range of problems school leavers in 1976 to 36.3 and challenges.

The fact that unemployment ago, there were confident expechas twice this year edged up to 2.48 per cent. a peak last tendance would eventually touched in 1955, mainly reflects the much slower rate of economic expansion. This has also charges shorter and offering time, vocational training schools, cheaper, shorter and offering specific skills, are in much greater demand since they appear to provide a greater assurance of subsequent employment. There are currently about ment. There are currently about

2,800 such schools in the country, tucoing out licensed computer programmers, secretaries and assorted technicians.

Total attendance is still only about one quarter of those alfully fledged universities but their position. as valid third option to going to university or straight into employment,

Which full service

shipping company believes in fleet

Fleet diversification. It's the name

of the game in order to meet

customer requirements and stay competitive. Our fleet currently

numbers 319 vessels of all shapes

carriers; oil tankers; heavy lifters;

LPG and grain ships. As one vessel

and sizes: Container ships: bulk

becomes obsolete—or shipping

needs change-so newer,

more efficient vessels are

introduced to service. This

way we can always provide

you with the kind of cargo

carrier you want, whenever

you need it.

diversification to meet

changing shipping needs?



Women are playing a stronger role in industry and now make up 34 per cent of the workforce.

Many are shown above in Brothers' sewing machine plant in Nagoya for the pider worker ere much bleaker than for the young. In 1980, for example, in the economy as a whole, there were 1.4 johs for every applicant under the age of 24, ynt for those 55 and older six applicants were pursuing one vaccancy. To-

Statistics compiled by the Labour Ministry are graphic. Some 20 years ago over half of working women were young (under 25) and single: today that calegory comprises less than that calegory comprises less than one quarter: In 1969 only 6 percent of women aged between 35 and 39 held jobs; hy 1981 that proportion had risen to 34 percent: in the 40-45 age bracket, 38 percent now are in work, against a negligible share earlier. All told the Japanese earlier. All told, the Japanese work force is now mora than

third option to going to university or straight into employment, is thoroughly established.

The general provision of excellent education is one, though not the only, reason why Japan is now following the Western experience in adjusting to a role in the workforce for women. Yet the challenge for Japan is much more profound for, traditionally, women were never considered a legitimate part of the long-term employment pleture.

The conventional Japanese woman was educated, worked for a few years hut hy her mid-20s was married in 97 out of was a relatively more pro-

100—and unlikely ever to return to other than casual, or low private counterpart, if for no other than casual, or low private counterpart, if for no other reason than that civil service exams are hased on merit. Statistics compiled by the Labour Ministry are graphic.

Statistics compiled by the Women are pot alonn in facture of the counterpart in the civil service exams are hased on merit. Statistics compiled by the counterpart is the counterpart in the civil service in all the counterpart is also a more counterpart. women are pot alonn in rac-ing particular problems in the force is also a more costly one. labour market. Japan is now As a result, counteracting the surpassed only by Sweden in the trend towards older retirement; longevity of its population (73 year life-span for men, 78 for women). As Professor Nachiro Ogawa

of Nihon University in Tokyo has pointed out, the labour has pointed out, the labour force is ageing very fast; he cites peojections that see the peoportion of the labour force composed of older (45-64) workers rising from 29 per cent to at least 40 per cent in the space of two decades (1875 to 1995). In both the UK and France the corresponding.

In the case of unemployment, responsibility has tended to devolve on the private sector rather than the Government, as is invariably the case in the Industry practices vary, but one common solution has been, and remains, over-employment.

and remains, over-emphyment. It is obviously rife in the growing services and retail sectors (in 1980 so-called tertiary industry employed over 55 per cent of the national work force, up from 38 per cent 20 years.
earlier, a hefty increase in a
nation of small businesses). This helps explain why Japanese productivity, 28 classic-

Japanese productivity, as classically measured throughout the economy, still lags behind the West. There are rough estimates that Japan has between 2m and 4m "surplus" workers. Were they to go, then the Japanese unemployment rate would rise

unemployment rate would rise two to three times.

But that is not the way Jepan does things. The concept of lifalime employment (even if, ip practice, extended in well under half the labour force), the sense of allegiance nr belonging to a group in work as well as in society at large, have demonstrated proven benefits.

benefits.

They provide e social as well as economic give and countless experts from the outside world are currently writing millions of words on how Japan does It and what can be applied, to differing societies, elsewhere. But, as a distinguished Indian economist once observed, it is precisely those qualities of patecoalism, nepotism and even featherbedding which help make Japan tick over so welt that are considered tha barrier to economic success in his own

WAGE DIFFERENTIALS

By age for male workers industries, enterprise siz and education levels (20-24 age group = 100)

Age group	1980	1981
-17	71	70
18-19	82	82
28-24	180	100
25-29	127	-127 157
36-54	156. 181	183
25-39 40-44	194	196
45-49	198	201
59.54	194	196
55-50	169	131

BUN

for terms of industry, wages rise with age until the 45-49 age group for the manufac-turing, wholesale, retail and wholesale, retail and server industries at each age level. The degree of increase be-tween these three industries, on the one hand, and the manufacturing industry, on the other, is larger for the former group after the age

onterprise, wages rise with age up to 45-49 age group for large (1,000 employees or more) and medium-size (100 in 999-employees) enterprises, and size (100 in 999-employees). in 999 employees) enterprises, and up to the 40-44 age group for small (10 to 99 employees) enterprises. The deprovers enterprise. Inc ne-gree of these wage increases becomes larger in propor-tion to the size of the enter-prise for those aged 30 and

ducements to employees to leave their posts early. If they do the joh prospects as Japan in anticipating prob-MITI looks with favour on high risk small businesses

SMALL COMPANIES

Nevertheless, Fujitsu was intrigued and offered Mr Watanabe help if he wanted to set up on his own. He refused financial aid, reasoning that if he took Fujitsu's money it would give them some influence would give inem some innuence on the new company's decisions. But he took three of his colleagues with him who had experience in marketing software and peripherals to set up Systems Formulate Corporation in 1973.

Now Mr Watanabe, who is also a professor of computer science at Kelo University, is president of a company which chalked up sales of \$7.1m this year. He hopes to raise sales to

year. He hopes to raise sales to \$10m or \$11m next yaar. SFC is capitalised at only \$220,000 and has 24 employees. It sells personal computers at its shops in Tokyo and Osaka and last year began marketing lts own designed hubble memory personal computer under ory personal computer under the name Bubcom 80. This was designed together with Fujitsu although SFC bore the costs and provided the technical support for the peoject.

The computers are now manufactured on Fujitsu production lines which means that SFC benefits from high quality production as well as economy of scale.

Rare in Japan

The little man makes hig story " is not so uncommon in Europe or the United States but in Japan it is rare, especially in the higher technology fields. For those lucky enough to make it into high companies which offer security and n joh for life or at least until your are 55 oner security and n jon for life
—or at least until you are 55
or 60 — the ontside world holds
little temptation. The recent
poor economic conditions have also made people less willing to

go it on their own. However the Ministry of Intecoational Trade and Industry thinks the time has come to encourage the high risk small venture businesses which have proved so successful in the United States.
It believes that fostering

some bright young things might provide just the impetus to pull Japanese industry out of the slump and beyond the now sickly primary industries like petrochemicals and steel which have dominated the country's industrial scene.

Right now, however, smell businesses, the seed bed for new energetic companies, are having a hard time surviving. They heve been hit hardest by the economic slump in Jepan. Retail husinesses face falling consumer demand and the pro-

were pursuing one vacancy. To-day, conditions are, if anything.

FOUR YEARS AGO Akio
Watanabe saw a future in small
personal "computers when
others treated them as highly
priced toys. He believed them would become a useful tool for small husinesses and thought his company should develop them.
While his employer, Fujitsu, Japan's largest computer maker, was sympathetic, it felt that the company's resources should he concentrated on the development of large-scale computers.

Nevertheless, Fujitsu was

Investment in plant and medium-sized businesses has slowed considerably. About 1,500 of these small scale businesses are reported bankrupt each mobility and MITT officials each mobility and mitter that the total number is mobility and mitter that the small of lits companies fall into the small to medium-sized hracket. A manufacturing company is thought to be small to medium-sized if it employs up to 300 people and has less than Y100m capital. For other sectors the levels are similar or lower than this.

A 1982 study of small and shews that well over 90 per cent
—in some cases just short of
99 per cent of all private bush nesses in different sectors in Japan are in the small to medium-sized bracket. In the manufacturing industry most of these businesses have fewer than nine employees—over 558,000 places of husiness.

More than a third of ship-ments of the manufacturing industry are accounted for hy firms with fewer than 100 employees and those with under 300 employees account for over haif of the total shipments of Japan's manufacturers. The Government has various

The Government has various schemes to help these businesses financially, technically and managerially. There are threa accrees of government-aided financing and they supply about 10 to 13 per cent of demand for loans from these businesses. Mitl estimates. These loans are usually made at prime rate and the use of the funds is monitored, it says.

There is also a public credit system which has 52 loan guaranty associations around the country to guarantee loans mada by hanks to small businesses. Another organisation

mada by manda by mand Another organisation

technical guidance sometimes technical guidance sometimes linked to special low rate loans. While more companies are going under, the number of small husinesses are growing even now, Miti's department for small and medium-sized enterprises reports. It notes that the data services sector has seen an data services sector has seen an increase as well as husinesses like mechine tools and robots. Information processing such as software and data services is

as somware and data services as an aree that Miti is proud of pointing out. The number of husinesses in this area grew from 1.015 in 1975 to 1.390 in 1979. It seems that hard times have taken their toll, however, have taken their toll, however, for the number of companies has shrunk to 1.343 in 1980—the last year for which figures are evallable. Sales have shown steady increases from Y2.971m in 1975 to Y8.057m in 1981. There are 250 companies which helong to two associations

for information processing end software manufacturing and MITI regards these as the main centributors to the promotion of Japanese computerisation. Many of these are subsidiaries

duction index of manufacturing industries continues to Hitachi, Fujitsu, NEC or Mitsu. The qualifications for listing are plummet.

Investment in plant and machinery by small and mology and jobs.

Of main frame makers like place for new dynamic ones. The qualifications for listing are strict as are the rules on who susplies them with money, technology and jobs.

Private companies have also

supplies them with money, termnology and jobs.
Other information processing companies have developed as part of a major industry like the automobile or steel companies. Only a few are independent companies which specialiss in software or systems for particular areas like engineering or nuclear fields.

vides research and descriptions:
facilities for software engineers.
It has had moderate success.
In 1981 55 companies had their
loans of Y2,549m approved,
bringing the number of projects
outstanding to 69, worth a total
v2 873m. ¥2,873m There is a little blt of money

There is a little bit of money available for companies which are already established but very little to help, those which are just setting up. To hridge the gap MITT has recently turned its attention to venture capital.

Financing is a little bit of money investment enterprise parties, and these are already involved in 17 companies for companies range from computer software makers to DIX suppliers.

Jafeo points out that there have already been notable refor a young company to straddle. Mr Watanabe of SFC was lucky. He had established a reputation as n computer dea reputation as a computer developer with some of Fujitsu's customers and when he set up the company e few railled around to huy shares, among them a textile company, data centre, wood importer and moving company.

Raising money was not easy, however. "About four years ago none of the banks could understand our peoject and so they wouldn't lend to us," he says. However, old contacts paid off again and two banks, which used computers he had design-

SFC has been wooed by Japan-ese and American companies and even by one British mer-chant bank.

Venture capital is not a new idea in Japan. A semi-govern mental venture enterprise cen-tre was established nearly 10 years ago to provide guarantees for loans for research and de-velopment. There are also investment companies in Tokyo, Osaka and Nagoya under the control of the government, but the assisistance they provide is said to be too small and too to foster husinesses. A committee will soon make

a report on how to improve the prospects for these high risk but potentially highly It ts companies. profitable companies. It is likely to advise that the guarantees available from the Government's enterprise centre be Another peoposal will be 10

market. Japan's OTC market is now more of a graveyard for alling companies then a hirth

Private companies have also shown a keen interest in becoming involved, lured by the his profits that businesses in the U.S. are reportedly earning. During this year the ranks of organisations prepared to give haspeing to small companies have expanded from six to 11 including two with overseas

links.
It is a long way from the There is a little bir of governo in the U.S. venture capital area. In markets but a beginning, MITI ment nurture in this area. In markets but a beginning, but I 1970 an information technology says. It estimates that invest-promotion agency was estable ment in venture business in lished to help companies. The Japan is about 3 per cent of the IPA provides guarantees for 36.600m outstanding in the U.S. bank loans so that new propagates for Japan Associated grams can be developed and Funnee Company is by far the marketed. The agency also propagates of the private venture vides research and development—capital companies. Its total facilities for software engineers. capital companies. Its total assets are larger than the total of all 10 other companies. This year it expects to have Y75hn in investments and loans out-standing and by 1964 estimates

these will rise to Y1470n.

This year it started two investment enterprise partnerships and these are already involved in 17 companies for a total Y1,700m. The companies range from computer software makers to DIX suppliers.

have already been notable re-turns for those in venture eepital in Japan. Last October it was the lead manager for a private issue by Sord Computer Systems, Jepan's up and coming small business com-puter company. The par valua of the stock was ¥500 but at markat price this rose to

Unanswered

There are plenty of un-aswered questions on just how well MITI and private invest-ment companies will succeed in venture business succe

Are there pienty of small compenies with innovative ideas nround? It is still the custom for the graduates of the "best" Japanese universities to heed-straight for the big companies without stopping to think of setting up their nwn business and once employed they rarely

panies willing to invest in the early stages of small business; where the risks are extreme and profits a long way in the future? In the past these post-panies have acted as furnished bridging loans for businesses on the verge of going public thus ensuring profit but fimiting

Do the venture capital con panies have the expertise to evaluate the technical side of their investments. Some observers expect the OTC market in provide funds for companies at an early stage in their development. In the of the market has been the to incentives that those in the OTC

Although Mirri is likely to Another peoposal will be to Although marks in many officer tax incentives to encourage investors and improve the market previous a similar present over the counter trading carrot, the finales ministry is not going to be happy at ment tex revenue disappear in t

Charting a course for tomorrore as well as today.

مكذا موالاعل

HOW CONSUMPTION HAS FALLEN (tons consumed per Y100m of GNP)

			•	
	1970	1975	1980	1981
Textiles	1.21	0.87	0.90 -	0.82
Paper	10.55	9.11	9.39	8.85
Ethylene	2.96	2.78	2.88	2.50
Steel			32.60	28.87
Ferroalloys	1.40	1.43	0.98	0.84
Aluminium ingets	0.74	0.78	0.86	0.81
	Source	· Industrial	Bank of	Jepan.

HOW PRODUCTION GAP HAS GROWN -(output indices for main industrial sectors 1975=100)

		- Februar	y figures	
	1977	1979	1981	1982
Processing and assembly Basic materials	126.7 110.3	156.3 124.2	203.3 114.9	213.6 115.8
All manufacturing industries	115.4	131.7	145.0	149.7
	Source	toduspial	Bank of J	epon.

Beyond the 'Pacific Belt'

REGIONAL DEVELOPMENT ROY GARNER

ANYONE WHO has experienced the horrors of riding in com-muter trains in Tokyo's morn-ing rush bour is likely to appreciate why there is a growing desire among Japan's population to move out of the major cities and back to the provinces often distant, which for a large num-ber of citizens represent their

lt is not only the physical dis-comforts of overcrowding and an urban environment which an urban environment which have led to the awakening of such emotions. After the postwar years of booming growth and sprawling industrialisation, the average citizen has managed to acquire most of the material needs of a comfortable modern life average for one

modern life, except for one thing; a house of his own. With land prices in the Tokyo region, for example, averaging Y229,000 (£564) per sq metre, large numbers of urban dwellers have simply given up their dreams of owning a house and settled instead for cramped rental accommodation. There is no shortage of provincial locations able to offer a far more

comfortable environment. The problem lies in creating the necessary local employment apportunities, a task which centres on persuading Japanese industry to break away from its habit of concentrating resources in the Tokyo-Nagoya-Casaka metropolises of the "Pacific Bell."

The extent of the imbalance of population coocentration can or population coocentration can be measured by the fact that the Kanto plain alone, with Tokyo as its hub, occupies only 8.6 per cent of Japan's lotal area, but is home for 29.8 per cent of its 116m population. In contrast the Northern island of Hokkaido has 50 per cent of the population and 29 per cent of the land

Decentralisation is not, bow-ever, a new aim for the Govero-ment, which as far back as 1962 promoted the spread of "new industrial cities." Whereas in the Sixties and early Seventles a shift towards regional growth was led by energy intensive in-dustries such as petrochemicals and steel, with their accompanyand steel, with mel's accompanying problems of environmental
disruption, the present drive to
localise production is being
spearheaded by the encouragement of knowledge—intensive
and technology-oriented activi-

Rural locations

The government bopes it can persuade prospective developers that the advantages which can he offered by many of the more rural locations so complement the needs of these newer industries that a general re-appraisal of traditional location policy is

in order.
The focus of such efforts is the plan being promoted by the Ministry of International Trade Ministry of International Trade and Industry (MITf) for the establishment of "techno polises;" high technology towns which, it is hnped, will act as catalysts for the development of surrounding regions.

The "technopolis" concept borrows much of its substance from the Silicen Valley development in California

velopment in California.

The plan involves chonsing local cities which already have

a reasonably developed indus-trial base, which must include trial base, which must include some established high-technology enterprises, and a population of around 300,000. These cilip will need to demonstrate an ability to attract, and provide the necessary facilities for, high-tech industries involved in such fields as integrated circuits high-technology, fibre obtics cuits, biotechnology, fibre opties and telecommunications. Many of these businesses will

be newly located on specially developed inland sites reminiscent of a university campus, which will offer a clean and attractive working environment. These high-technology sites will also enjoy a close liaison with the local communities especially local colleges and universities, and new research institutions will have to be de-veloped to provide specialised

R and D support.
When the "lechnopolis" plan
was first announced in autumn
1980, the response from local profectures was immediate and enthusiastic, with 38 cities and

districts bastily submitting out-lines of their "qualifications" and proposed development

Of these, 19 candidates were shortlisted by MTII as possible candidates for official designa-tion as technopolis sites. The Government bopes that six such cities will be well established by 1990, but in the present severe fiscal climate only one or two sites are to be given the go-ahead initially, probably early in 1983.

Although local cities are ver keen to obtain the "technopolis" designation, it is likely to be more of a psychological boost than a financial one. Proposed government aid will extend for 10 years and will consist of such measures as exemptions on pre-fectural and local taxes.

Prefectural governments will be authorised to subsidise local road construction to the tune of arnund Y15m and there might also be an allowance of Y2,500 per sq metre towards provision

of sports facilities.
Negotiations are now under way between MITI and the Finance Ministry to cut interest rates for government-arranged regional development loans

from the present 8.4 per cent to 7.3 per cent.

Independent local enterprise and self-help are the key qualities which the Government is encouraging, and local authoriencouraging, and local authorities are expected to enlist the co-operation of established businesses and local private industry in the technologis development process, to compensate for limited central government resources.

Artificial port

have a bigh chance of success is Toyama, on the Japan Sea coast. During the '80s Toyama city constructed a Y100bn artificial port with integrated zones, only to see the energy-intensive in-dustries it had been designed to attract wither in the wake of energy crises.

Undeterred, the city chose to try a completely new tack, as

a bigh-tech industry location. The nearby town of Yatsuo, population 23,000, which already has 30 electronics parts businesses, was chosen as the site nesses, was chosen as the site for a Toyama technopolis, and work is already under way on its Y9hn inland industrial park of 50 hectares, 27 of which, it is hoped, will be sold by 1985. The inland site offers the plentiful of the property of the plentiful of th liful clean water, and salt free air, necessary for the delicate

production processes associated with high-lech products. The prefecture also boasts one of the nation's highest one of the nation's highest levels of education, and this high availability of skilled labour was demonstrated recently when local robot producer Fujikoshi offered 22 vacancies. Over 300 young people applied, mainly natives of Toyama studying in universities in Tokyo and Osaka, and keen to return to their home

sities in Tokyo and Osaka, and keen to return to their home prefecture to work. Local accommodation prices, which al Y20m for 250 square metres of land plus a bouse are a tiny fraction of tose in the major cities, and a major attraction. Toyama is also extending its airport to accommodate the jets which it hopes may one day be transporting semiconductors and other bigh value-added proother bigh value-added products and, as the city grows, il even hopes its port might attract new attentions and find

new uses.

Toyama is also typical of prefectures planning technopolises, in its anxiety to attract foreign companies, who are equally eligible to receive all available financial incentives. Some 50 foreign companies, many in high technology fields such as semiconductors and blotechno-logy have located in Japan during the past five years and MITf says 23 more are seeking

sultable locations now. Many Japanese companies seem slow to decide on the advantages of local area and the arrival of foreign companies is seen as a way to highlight these opportunities. This has been particularly true in the "semiconductor island" of "semiconductor island" of Kyushu, which boasts a foreign company in each of its seven prefectures, and now handles 40 per cent of Japan's total semiconductor production.

Early next year representa-tives of the seven prefectural bodies will bold promotional meetings in three overseas cilies, including Niv York, in a unique bid to attract further new investors.

Ten reasons why MITI has a headache

DECLINING INDUSTRIES CHARLES SMITH

Basic majerials industries such as aluminium smelting, petrochemicals, paper and pulp and fertilisers bave either been growing very slowly indeed or not growing ot all in Japan during the past five years or so and have in addition been chalking up some spectacular losses. The problem of how to restore such industries to health, or alternatively of how to let them disappear without causing too many awkward sideeffects, bas, become a major effects, bas, become a major beadache for the Ministry of International Trade and Industry (MITI).

more and more adept at econo-mising in their use of malerials. economy.

A second problem is the high tost of the materials industries also face a situation of the world for its competitive strength in industries auch as cars, electronicss, sleel and the materials and the materials industries also face a situation of the materials.

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In the materials industries also face a situation of the materials also face a sit A second problem is the high

industry is at a similar slightly less dramatic, disadvantage visa-vis competitors in the U.S. It uses imported naphiha as its main feedstock and is therefore, burdened by far or higher raw material costs than of petrochemical industries using natural gas.

The MITI with materials industries in materials industries i The Japanese petrochemical industry is at a similar, though slightly less dramatic, disadvantage vis-a-vls competitors in the

The situations in the 10 major costs provided the main, explanation for the spectacular officially classified by MITI as losses incurred over the past two to three years by the ferture certain common features can be detected. One of the problems the materials industries that the demand.

a given amount of growth in the materials industries and the with smelting technology. It raised on the 400,000 tonnes by MtTt's new taw is expected economy as a whole has fallen apparently irreversible weaken-sharply since the 1960s—as ing of demand for their proother industries have become ducts are not the only difficul-

strength in industries such as cars, electronicss, sleel and machine tools. What is less well known is that the country also harbours some hopelessly uncompetitive major industries.

Basic materials industries such as aluminium smelting, petrochemicals, paper and pulp and fertilisers bave either been growing very slowly indeed or not growing of all in Japan processes of some Y80bn (about £200m) during the currol for leading to find the effect of depressing the industry, which is expected to incur losses of some Y80bn (about £200m) during the currol fragmentation "leading to excess competition is the petrochemical industry, where 12 companies operate a total of 15 companies operate a total of 1 dozen or so companies each linked to an independent—and grossly over-extended—network of retail outlets.

Industry would weaken Japan's bargaining power dangerously vis-a-vis foreign suppliers-

cily needs to be cul-probably to around 700,000 Jonnes a year from its current 1.1m toones level and from a peak of 1.6m achieved in the early 1970s)in order to end exress competition within the industry and to reduce losses on overheads.

plans are how in persuade the industries concerned in accept seemingly painful and drastic "survival prescriptions" and how to ensure that the plans—
if they are finally accepted by
industry—can be implemented
without falling foul of the country's anti-monopoly legisla-

of difficulties appears to have involved some complex bargainreturn for the payment by the tries share is that the demand finling industries. However, the besides depriving the country Government of a sum equal to major industries is already on for their products generated by costs of basic inputs into the of the chance to keep abreast the revenue that would be the statute book. However,

result of the capacity cuts.

The deal worked out with the ance by MITI of a six month "recession cartel" for the industry in exchange for acceptance by the petrochemical manufacturers of the Ministry's longer term programme. How-ever, the Ministry still has to circumvent the legal problems posed by its rationalisation plans—it is hoped by means of a special law exempting certain industries from the provisions of Japan's basic anti-monopoly legislation planned to come into

Regrouping

In order to introduce the new law (which would permit com-panies in designated industries to negotiate with each other on to negotiate with each other on the scale of capacity cuts and on "regrouping" arrangements! MITI will shortly emhark on a series of lengthy negotiations with the Fair Trade Commission (FTC1 (the body which acts as the guardian of Japan's anti-monopoly legis processing. "Tied imports," involved some complex bargain body whitch acts as the cuardian some of the industries concerned, for the case of aluminium, for example, it was agreed that the five main companies would embark on a production-cutting programme in alisation measures" in he return for the payment by the undertaken in designated

also argues that smelling capa- which imports might rise as to be more ambitious than its predecessor (in terms of the types of collaboration to petrochemical industry has be permitted between com-included "reluctant" acceptwith the FTC promise to be

Tough. If the MITI restructuring programme goes shead un the lines which the Ministry appears to envisage. Japan should emerge by the mid to late 1980s with slimmed down materials producing sector that will be incurring much smaller losses than those of today's industries -and might even be competitive in some sectors, depending on what happens to oil a al energy costs in other countries. MITI hopes to arrive at this

mtiff hopes to arrive at this gnal without having to resort to any uvert harriers against imports talthough its above-mentioned deal with the alu-minium industry has been interpreted in some quarters as a form of subsidy to the indusmeaning imports of materials produced by overseas ventures tsuch as the Asalian aluminium project in Indonesial in which dapanese companies have a major stake, will fill much of the gap, leaving relatively limited scope for other sup-

TECHNOLOGY

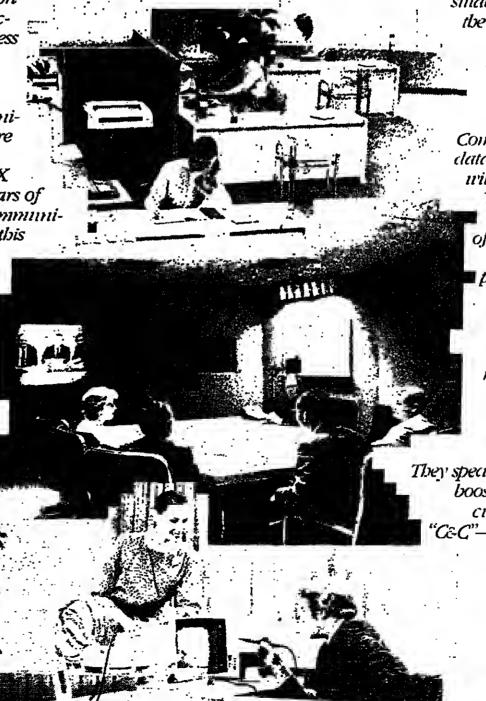
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incorporating our own advanced semiconductors plug nicely into this network, triniming profiteating expenditures all along the uray! This applies as much to our large generalpurpose computers and business



computers as it does to our small, personal ones like the PC-8000 - the bestseller in Japan, The NEC teleconference system takes our . philosophy yet another step. Combining a variety of data processing systems with communications systems, it can save businesses millions of dollars annuallyand business people thousands of bours of needless trarel. These are only a few of over 15,000 different industrial, business and bome electronics products manufactured by NEC. They spearbead our drive to boost productivity and curb costs by way of "G&C"—a concern sbared by our customers in over 140 countries.



Coming to grips with the revolution

TECHNOLOGY JUREK MARTIN

ONCE A YEAR, the Japanese phone company, Nippon Telephone and Telegraph, opens the doors of one of its three research laboratories to the public. At the start of this month, it was the turn of the Yokosuka electrical communications facility about 50 miles Yokosuka electrical communica-tions facility, about 50 miles south of Tokyo. Over three days, something like 12,000 people, mostly local citizens took the opportunity to stroll around.

What was striking was not the consumer gadgets that were on display, though some of these were diverting enough. Rather it was thet serious and sober exposition of some of NTT's latest hreakthroughs on the frestiars of technology—in the frontiers of technology—in microwave transmission, in optical fibres and in a system which can translate the immensely complex Japanese language from text to an NTT's assumption justified by the apparent interest and response of the audience, was response of the audience, was that the average Japanese, in so many ways the product of a traditional society is capable of absorbing such complex

Later in the same week
Toshiba occupied a large part
of Tokyo's biggest hotel with an
even more diverse and glittering
array of its products. It
featured the first public showing
by any Japanese company of a

thought about, and planned, its
path into the post-induatriel ege,
based on high technology. Contrary to popular Western
opinion, the Japanese record on
this is far from infallible, such
as its failure to create an

Both exhibitions were really no more than drops in the ocean evidence of the way in which Japon is coming to grips with the high technology revolution, the high technology revolution, knowledge of which was, at lesst initially, largely imported. It is often said of the Japanese that they can copy and improve bul not invent the genuinely originel, perhaps because of their social reliance on the group, as opposed to the individual, way of doing things. The Japenese do not worry ebout this, even at the relatively trivial level of bemoaning the national failure to win Nobel prizes in tha scentific disciplines in the quantities that the U.S. in the quantibes that the U.S. managea to garner.

Quantum leap

But from e practical standpoint this may miss the point. In an era of astonisbingly rapid technological change it rapin technological to dis-becomes ever harder to dis-tinguish the incremental ad-vance (at which Japan is so occasionally European, preserve).

What does distinguish Japan is the extent to which it has thought about, and planned, its

256 kilobit RAM chip, not to indigenous aircraft industry new industries and supplying —but it is being heard from mention sophisticated imovations in applied micro circuity, bind government and industry fruits of its own technological A chronic problem for new radiography and office into Japan las in the sommon research and statistical market. into Japan Inc in the common effort always quite as solld as might be imagined.

There has been a basic recognition, however, that the key economic growth in country like Japan, with its limited physical, though not buman, resources, lies ln making the most of what il can do well. If thet means 64 kilobit random access memory chips, increasing sophistication in industrial ceramics or even the generation computer, than the development of oil or literature, so be it.
In the process, Japan can also
maintain that it is making a

positive contribution to the sum total of global expertise rather than merely aiphoning off what others bad developed first. Free of the burden of committing vast research and development expenditure to defence, with its always dubious commercial spin-offs, the Japanese Government's guiding philosophy is that what it does spend on R and D, and what it tinguish the incremental advance (at which Japan is so expert) from the quantum leap (atill seen as an American, and R end D outlays have traditionally been low by international standards, though the gap bas

> about twice that of the However, the Government, principally through the auspices of the Ministry of Trade and Industry (MITI), has an impressive record of nurturing

narrowed, whila the private sector's spending on R and D is

MITI has also proved ade at getting companies who would normally be at each other's competitive throats to pool research, at least in the early steges of product development.
The Government also sets priorities and sometimes, though this is more difficult to ascertain, specific goals. The celebrated MITI blueprint for the 1980s identifying haale areas.

1980s identifying baalc areas for research (new energy sources, aerospace, information industrial sources, aerospace, information processing, new industrial materials etc. is constantly being refined and updeled.

In e sense this does reflect the latent Japanese nervousness that only by dint of conatent application can the great fear—that some individual genius in the West will make a qualitative technological hreakqualitative technological break-through that will again leave Japan behind—be overcome.

Some observers even aee in the pending California court case—in which Hitachi and Mitsubishi Electric are accused of plifering trade secrets from IBM—a symptom of fundamental Ispanese technological in tal Japanese technological in-security. Fujitsu may have passed IBM Japan in the domes-tic market, but the American company is often portrayed as the repository of ultimate tech-nological expertises with which nological expertise, with which Jepan cannol compete, at least

not by fair means.

The implication may be unsustainable with hard evidence—since outright commercial theft is distinctly un-Japanese

A chronic problem to industries in the West is the dearth of risk capital Japan is dearth of risk capital Japan is not immune to the same afflic-tion, which explains why Euro-pean and American venture capital is currently scouring

Japan for likely prospects.

But more significant is the record of Japan's industrial giants and their hanking associgiants and their hanking associ-ates of taking the longer view by investing themselves in new technological fields where an early return is not necessarily in sight. This has been made possible, in part by the com-plete sub-contracing network that is charactaristic of Japan-ese industry.

Trickle down

This has ensured a sort of practical "trickle down" approach benefiting both smell companies and enabling their larger patrons to keep close tabs on technological developments. have been built in good measure on a free flow of information that is perhaps uniqua to this

Tha great question now whether Japan is about m be boist on the petard of its uncial application of new techno cial application of new technologies. Both the U.S. and
Europe (the latter most
recently in the ideas presented
to this month's EEC summit
by M Gaston Thorn, president
of the Commission) are turning
their attention to regulating their attention to regulating

In the U.S. there is particular concern about the degree to which Japan is surpassing the U.S. in the chip market: Europe is motivated by a more fundamental concern that it is about to be left behind by both the U.S. and Japan in the bigh technology atakes:

feel that this Western tactie is a little unfair. It is true that ln certain well known sectors (video television recorders, televisions, audio equipment, televisions, audio equipment, televisions, audio equipment, televisions, audio equipment, televisions, audio experiment, audio experi for years it actually ran an adverse balance on its technological trade with the West as it acquired the information it is now putting to practical use. It still does in some areas.

Also beginning to be heare are the voices of internal dissent about the path down which new technology is leading the country. So far the remarkable cohesion of Japanese society combined with a solid record of economic growth, has made possible the rather easy absorption of technological innovation. nological innovation.

The post-industrial society, in its fullest forms, presents as complex a set of challenges to Japan as to any other country.

After all, not everybody who
walked through the NTT exhibition at Yokosuka was wearing
hlue jeans or business suits and
doublesheeking data on soler doublechecking data on solar-powered pocket calculators. Some were wearing kimonos and looking ever hit as bemused as they had good reason to be.

these days are facsimile machines. In the first nine

over, the trend now seems to be for facsimilies to take over

Saturation point

Although only 59 per cent of businesses use facsimiles these days, compared to 78 per cent for

plain-paper copiers, the latter market seems to be reaching a

saturation point. From Januery to September this year, reports Japan's Business Machina Makers Association, sales of

"conventional" office equip-ment (ppcs, desk-top calcula-tors, typewriters, etc) recorded

only a little over 1 per cent in-crease over that of the same

The association does not say which particular item showed

sales decline, but it is gafe to say the ppc, with facsimiles steady encroaching, is becoming

as obsolete as the typewriter.

Facsimile's present popu-lerity seems to stem from the

frustration with word processors. Japanese type processors

are not easy to master unless one is also used to the Japa-nese character typewriter key-board. Though makers have come up with a kana-to-kanji

conversion system and all sorts of word-processing contests are

being beld all over the country,

its adherents are few and far

JIOA's Mr Suzuki thinks makers should devote their time instead to developing

voice processing equipment "

For the business sector, 80

office equipment—but could be

period in 1981.

between.

Super breed seen as key to leadership

COMPUTERS

OHN HARTLEY"

IN THE PAST year, Japan's in of dominating the world of computers bas taken e new, more ambitious course. Now the targets are super computers—oltra-fast and ultra-specialised and the totally new fifth-generation machines.

Whereas new models from Fujith and Hitachi ara spear heading the assault on the super computer business, the fifth generation computer is no more than a concept — but already a 10 year programme lo turn that his to reality is under

As its name implies, the fifthgeneration computer is a whole range of computers, some of which may not even be recognisable as such. The concept will be included in the replacement for every computer we ment for every computer we know, from the devices in vending machines and calculators, through personal computers to the huge mainframe computers used by governments and inter-national companies. The con-cept involves naw hardware and software, but the software holds

By contrast, the super com-puter is a specialised machine, used mainly for very low, com-plex mathematical formulae hy scientists in nuclear research weather forecasting, aerospace design and large-scale simulations is demography and other

It is a business in which IBM. the world's leading computer maker, is not even involved. In fact, the leader is Cray Re-search, whose machines were the fastest available until the new super computars from Fujitsu and Hitachi came along Since the calculations are very long, speed of processing is the key in these computers. But it is not just a question of making many simple calculations on the wages of a payfoll of 10,000. It is more a question of how quickly it can solve complex mathematical prob-

facsimile machines and plain
paper copiers:
Technical problems aside,
more and more husinesses are
convinced that they have to
automate fully to increase office
efficiency now and to cut down
on labour costs in the future.
Of Japan's present workforce.
43 per-cent ere engaged in
white-collar tobs of which a

But if the market is so spe-cialised, why should the big. Japanese companies become involved? For a start, as has been shown over the years, the Japanese always try to free themselves of dependence on foreign companies for anything important. Then, some experts consider that super computars are the key to leadership in both computers and high tech-

Fujitsu's reasons for entering the tray appear to he more pro-saic. "From now on, super com-puters will be used more by industry. By 1990, they will be used more by companies than ny-government, said Takamitsu Tsubhimoto, the computer engineering deputy manager at Fujitsu. He adds: The need for higher performance is end-

Units shared

In any case, Fujitsu has designed the new VP-100/260 super computers so that they share many units with the top general purpose computers. Currently, there are only about 50 super computers in the world, and over 30 of those are in the U.S. The Cray One

has been the benchmark in this husiness, and it has an operating speed of 400m finating opera-tions per second (400 mflops). Fujitsu claims that its new VP-200 has a speed of 500 mflops, whila Hitachi quotes 630 mflops for the S-810/20. Fujitsu reckons that when used for standard programs includ-ing some benchmark tests devised by the Lawrence Laver-

more Laboratory, the VP-200 is six to eight times faster than the trendsetting Cray machine. Although Fujitsu claims that the VP-200 is much faster than the VP-200 is much rester than the Cray One, the main sim same way that he would was ease of use. "Our target was to produce a computer that has better actual performance werbally, but in many at the customer's sife," said Mr

Tsuchimoto.

Hitachi has taken a similar problems with computers of this type is that the main memory cannot hold all the data and programs needed, so many are stored in external magnetic discs. However, when the processor needs to get data

relatively long time is needed for access. of that two-tier main and external

for that external memory, a

memory a "global buffer" and Hitachi's is called "an extended

Both stores frequently used data which can be shuttled in and from the main memory very fast — up to 300 times as fast as from the external memory. To speed up further the operation of the main mediory, Fulitsu has opted for static in-alead of dynamic ram — a sig-nificant development.

The edvantages it gives are ample justification for the Japanese policy of concentrating on memory and not on microprocessors in their semiprocessors in their semi-conductor industry. Certainly the speed of operation of the static over the dynamic rem has a dramatic effect on operating speed. It is faster because the contents of the memory do not need to be "refreshed" periodically — in other words, more time is available for operations. There are no completely new technologies in these super com-puters, but they do push tech-nology forwards. So competi-tive is the Japanese computer business that others will com-pete. NEC bus elready said that it will enter the super com-puter business soon, and an operating speed of 800m flops is being talked about — twice as fast as the Cray and 25 percent faster than the Hitachi machine. Whether it will be easier and faster in practice to

Stepping stone

In any event, these supercomputers are a slepping stose to the real super computer of the 1990s. Japan's Ministry of International Trade and Industry (MITI) is already starting a super super computer pro-ect not to be confused with the fifti generation computer— intended to produce a machine with an operating speed of 10bn flops, 20 times faster than the Fulitsu VP-200.

This is expected to rely on Jacophian Janotion technology, and is intended to be developed by 1990. By then user-friendly super computers with a speed of one billion flops should be commonplace.

Although that super computer project is separate from the fifth generation project, which is also being sponsored by Mirt. example, much of the hardware. such as the newgallium arzenide Junctions, will be used to speed up operations in both.

Ir could be ergued that the fifth generation concept is essen-tial because developments in hardware the con-machine itself and the conductors Inside It-are Kalloplng ahead so quickly. Today, a mainframe compuler such as that used by a large company to handle its number-crunching-costs about £2m.

It is forecast that in less than five years en equally powerful compuler will cost only £1,500 so almost every businessman will have one in his office. But to turn the computer into a machine that can be operated a lot of software is needed.

The problem is that software costs more than hardware at ready, and in turn the computer into a tool for the layman much more complex software than is available now is needed. In the future, the computer must be as-easy to use as a TV set, tele-phone or instant camers.

This is where the fifthgeneration computer comes in. ments before that can become e reality, and It is these that the e ere teckling First, there is the development of "an intelligent Interface and interpreter between the man and

Secondly, the plan is to develop hage collections of data bases for anyone to use. A group of engineers from industry, researchers from government laboretories and from privale universities, are setting out to hreak the software barrier while developing new elements such as very fast processors and huge memories.

The aim with the Intelligent

interface is to simplify operations. Access is at through a keyboard. The plan is to change all that. Instead, the user will ask a question in the same way that he would ask bis The answer will be green verbally, but in many cases a "wrillen" answer will appear

on a display as well. If the Hitachi has taken a similar question is too vague, the tonline, since the control program
is based on the operating system of the Hitachi generalpurpose machines. More significantly perhaps, both share
the same technique to speed up operations. One of the main
needs a lot of new hardware. So huge is the problem that

the Japanese have invited other countries to join in the project and it is possible that British. West Germany and the U.S. will ba involved. But not all the experts agree that Japan will succeed in cracking the fifth generation nut. After all, the country has a poor record for

innovation.
*John Hartley is the Far See Editor of Electronics Times and three-level storage system is Editor of Electronics The sed. Fulltsu calls its extra The Engineer magnitudes.

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ing a 30 per cent increase in the number of manufacturers joining in."

Standable given the fact that costs, a great bulk of office work involves compiling documents—sometime in the complex of native dual syllabary and computer giants like Fujitsu, NEC and Toshiba down to with relative ease into the shore characters.

IN CONTRAST to the generally lack-lustre performance of meoy of its industries, Japan's office automation husiness is experiencing a heady boom. Last year production accounled for 2 per cent of the country's growth within the next decade.

"No olher industry can hope makers of paper copiers, calculators, cameras, optical equipmaters, cameras, optical equipment, even office furniture. Suzuki, director of the newly-distribute of established Japan Institute of the country's "That's why we're now witness-"

The Tush is under- with relative ease into the shop makers of paper copiers, calculators, cameras, optical equipment, even offica furniture. Their main target is the domestomated by JIOA established Japan Institute of established Japan Institute of the country's "That's why we're now witness-"

The Tush is under- with relative ease into the shop makers of paper copiers, calculators, cameras, optical equipment, even offica furniture. Their main target is the domestom workers in routine tasks posed, the makers of paper copiers, calculators, cameras, optical equipment, even offica furniture. Their main target is the domestom target is the domestom target is the domestom target in the shop makers of paper copiers, calculators, cameras, optical equipment, even offica furniture. Their main target is the domestom target is the domestom target is the domestom target in the story of the country in the relative ease into the shop makers of paper copiers, calculators, cameras, optical equipment, even offica furniture. The paper copiers with relative ease into the shop characters.

Indeed, a recent survey of companies with 300 or more months of this year alone, makers sold Y105.679bn worth at home, a 35 per cent increase from the great majority preferring facsimile machines and plain paper copiers:

The companies of the first nine months of this year alone, makers sold Y105.679bn worth at home, a 35 per cent increase from the same period last year. There are some 20 Japanese facsimile manufacturers how that include also that hig contents the property of the companies of the first nine months o

43 per-cent ere engaged in white-collar jobs of which a the function of ppcs, where Ricoh has the obvious expertise. majority are doing mostly routine paperwork.

Their number is expected to grow to 50 per cent in 10 years ind since they customarily get a larger share of wage increases compared to blue-collar workers, businesses are growing wary. It is cleer that they won't be hiring new staff.

Recent Labour Ministry statistics reveal that unemployment in Japan has grown to
2.48 per cent from last year's
2.2 per cent. But JIOA's Mr
Suzuki, who sits on the ministry's micro-electronics comtry's micro-electronics mittee, claims this is due to a general economic slowdown, not as a result of office eutomation.

"The committee did find," ha adds, "that OA will have a con-tinuing impact on the femala workforce, but that won't be in the immediata future." Another poll, he says to survey workers' attitudes to office automation indicate so far" that they welcome the shift to more creative jobs as a "result of having spare time."

Gradual process

that the Japanese are plunging into full-speed eutomation overnight As management experts see it overall office com-puterisation is not "a one-day happening" but a gradual pro-cess that should involve all jobs and all personnel, not only secretaries and clerks.

That seems to be the cue to equipment manufacturers: companies are not going to invest heavily in single-unit type of OA machines now flooding the market but will be waiting for more integrated-function sys-Mr Yoshiya Kilamura of sord, the phenomenal small-I think the OA boom is cooling off a blt, and not because of the economic recession either. Judging from the orders we receive, would be users want to buying: they

Sord which leads the pack of 40 or so mini-computer manufacturers in Japan admits that the entry of giant computer companies into the office autosales. The company which sold Y10.5bn worth of machines in 1981, a 100 per cent increase on the previous year, had projected another 100 per cent sales in-crease this year hut is now revising its goal to just 50 per

NEC. Japan's third bigges computer manufacturer and world'a No. 2 supplier of very large-scale integrated (visi) circuits, sold a total of 150,000 units — value undisclused — in

Even so, this doesn't mean

or "voice processor" if they want a bigger share of the mar per cent of which wants to auto mate thair offices within tha next ten years, the ideal "office of the future" should feature an integral machine nputer maker says: that looks like a personal computer, functions as a wordprocessor, duplicator and com-munications network. In other words a desk-top machine that has all the refinement of present-day computerised assorted vaiting for the computer that can do everything.

had for the price of one. Whether the range of manufacturers struggling to get into the OA market now can meet that challenge no longer seems a most question. A couple of nation arena has affected its giant computer firms have already put out a prototype of that machine now labelled as "work station." The OA market is still a free-

for all Even foreign makers are quite welcome, but the real growth erea will be in the manufacture of fully automated jack-of-all-trade office machines. Makers are scrambling because they need the footbold, an important prerequisite for sne cessful marketing later.

Ho

64

JAPANESE INDUSTRY V

64K Ram makers may have 70% of world market

INTEGRATED CIRCUITS ROY GARNER

THE INTEGRATED circuits industry, perhaps more overtly than any other in Japan, is in the midat of market-share fever. At the centre of all the activity is a crucially important product, the 64 Kilobit Ram (random access memory) chip, often described as the first generation stage of VLSI (very large scale integration) pro-

The Japanese are lesding the world in production of the 64 K Ram, and several companies are siming for output in the rsoge of 2m to 3m pieces per month by early next year.

The huge energies being devoted to the product do not arise solely from the seemingly insatiable demand from a burgeoning range of electronics firms, large and small, in Japan and worldwide. Success in achieving a good market standto capturing the business of customers who might later choose to stay with the same company when purchasing semiconductors of future generations.

Profitable

These could include, in the not-too-distant future, the 25fi K bit and 1 Megabit i/cs which some companies have already announced they are

The profitable 64 K bit business is important also as a generator of both funds and echnical expertise for utilisation in the development of later, more advanced, and bopefully innevative, products.

finding the anxious messages 29.1 per cent to Yt12.5bn. The announced bowever, and makers

The Japanese argue that the principal factors governing their decisions on pricing and production increases are the massive growth, and competi-tive vitality of the domestic

The strength of this local demand was evidenced by the outcome of a major fire, in early October, at the 64K Ram production plant of one of the leading makers. Oki Electric, which had been producing Impieces per month. After the fire, a supply shortage of as much as 30 per cent became quickly apparent and spot quotations apparent and spot quotations for the chip, which bad previ-ously been on a uniformly downward curve, showed an uncharacteristic rise.

Industry watchers also report that some major customers of the 1/c producers are under great pressure from smaller electronics firms, unable to obtain supplies, to re-sell soma of their 64K purchases to them,

and at a profit.
The U.S. pressure over semiconductors is often described as a search for a scapegoat in its wider differences on trade issues. The Japenese counter that the market is anyway big that the market is anyway big enough for everyone, They also point out that the U.S. companies IBM and AT&T have a "captive" production of 64K Rams, for in-house use, of unprecedented scale, This, they suggest, puts Japanese achievements in a more realistic perspective."

that the Japanese were limiting tent. although aggressive maratheir exports in order to raise keting by U.S. makers is the end of 1983.

prices; and in doing so violating anti-trust laws. The White in the near future. Within the near future within the near future. Within the near future are producing field of memory i/c must quickly the MEC and sible restrictions against Japanese semiconductor imports on the grounds that, because of its defence applications, the product is vital for national chips per month by March of the 64K Ram, led by NEC and Fujitsu who have both announced their intention to

Investment boosted

In NEC's case, this will repre-In NEC's case, this will represent an increase in production capacity of 50 per cent in just five months. NEC has also raised its total j/c investment from Y45bn to Y48bn for fiscal 1982 (ending March 1983). Within this figure 64K Ram investment was recently hoosted from Y9bn to Y13bn. Hitachi has set a production

Hitachi bas set a production target of 2.2m pleces per month by the end of the year, and increased its total i/c investment by 20 per cent for 1982

Mitsuhishi Electric's total i/c investment in 1982 was 54 per cent up on 1981 at Y20bn. Threequarters of this total is reportedly going towards the 64K, which Mitsubishi now produces at a vite of around impcoduces at a rate of around 1m units per month.

The company's target for the end of fiscal 1982 is 1.8m units per month. Toshiba produces around Im 64K hit chips per month. Oki Electric, which enjoyed the same output in August, before its factory fire, is now aiming to achieve 80 per cent of this figure by next March.

finding the anxious messages emanating from the U.S., in particular, both worrying and confusing.

Last year the Americans compiained of over-supply forcing prices unfairly low. This year the Justice Department charged that I have a share of about 70 per the standard to have a share of abou

he consolidated by major strides forward in the fields of micro-processors and other logic cirdominated by U.S. concerns, notably Intel Corp, Motocola and Zilog.

NEC was the first Japanese

company to move into micro processor research, in 1972, and has already developed both eight-bit and 16-bit models on its own.

The bigh level of NEC's research achievements is reflected in the deal the company reached in July with Intel Corp of the U.S. Under the five-year con-tract the two companies will exchange technical information exchange technical information on microprocessor LSI. Intel previously bad a second source contract with NEC, and also with Fujitsu and Mitsubishi, Similar second-source deals exist between Hitachi and Motocola and between Toshiba and Shara and Alice.

Sharp end Zilog.

NEC and NTT have both claimed world-class sdvances within Gallium Arsenide technology this year, NEC with a 30 picosecond switching time. at room temperatures, and NTT with a 1 kilobit Static Ram offering 3.7 nanosecond address

access time with only 280 mw
of power dissipation.
NTT has also made important
progress in the direct amplification of optical signals using newly-developed semiconductor chips, which represents a move closer to the realisation of high

innerative, products.

The present market battle in Japan is, in effect merely a jost-ling for starting positions with the 64 K seen as the first major hurdle. Japanese makers are acutely aware that their success in this field cannot be seen in isolation from the world-wide ramifications of the arrival of the product liself.

The highly competitive standlog of the Japanese industry was described recently in Time magazine as being "formidable and frightening" and Japan is in companies IBM and AT&T have a panies, Matsushita Electronics, Sharp and Tokyo Sanyo Electric are gearing up for 64K Ram predediction of the most positive developed are expected to enter the market being up for 64K Ram predediction and are expected to enter the market being up for 64K Ram mass production and are expected to enter the market being up for 64K Ram mass production and are expected to enter the market been alot of speculation recently ebout the arrival of 256 Kilobit Rams. NEC, to reach Y827.3bn in 1982, an increase of 26.5 per cent over last year, according to the magazine as being "formidable and frightening" and Japan is companies in Japan and the U.S. companies, Matsushita Electronics, Sharp and Tokyo Sanyo Electric are gearing up for 64K Ram mass production and are expected to enter the market been alot of speculation recently ebout the arrival of 256 Kilobit Rams. NEC, Hitachi and Fujitsu are known increase of 26.5 per cent over last of 256 Kilobit Rams. NEC, Hitachi and Fujitsu are known increase of 26.5 per cent over last of 256 Kilobit Rams. NEC, widely claimed to facilitate the bighest productivity levels any-nents have hegun.

No clear dates for the introduction of the 256K have been alot of speculation of the spect of the realisation of the spect of the most positive.

The highly competitive standing the products by a panies achieve are gearing up for 64K Ram an

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Hopes pinned on new products

CONSUMER **ELECTRONICS** ROY GARNER

AFTER A lengtby period of prosperity, this year has sean Japanese manufacturers of consumer electronics goods thrown sharply onto the defensive as traditional markets such as colour television and audio equipment have reached saturation levels. Meanwhile, economic restraints have produced a more parsimonious breed of consumers and onceconfident companies bave been seen to falter over misjudge-

ments in marketing strategy. In April, overall production levels recorded their first year to year decline since May 1979, totalling Y278.4hn, down from the record high level of Y338.9hn in October 1981. In most sectors the picture has been one of rising inventories and diminished market poten-

The industry's principal bopes now rest on the success of new products such as the digital audio disc (DAD), portable computers and miniature TVs. Priority has also been given to the restoration of con-sumars' trust. This had been badly weakened by disorderly marketing, most notably in the fields of multi-standard VTR

equipment and video discs.

The biggest sethacks bave been in the audio equipment sector where annual production is expected to drop by as much as 23 per cent and domestic sales by 30 per cent in 1982. according to the Electronics Industries Association of Jepan.
One of the earliest casualties
of the slump was the leading

audio manufacturer, Pioneer Electronics Corporation, which was forced to cut production by nearly 30 per cent early in the year. Sony, Matsushita Electric Industrial and Trio Kenwood also reported production wood also reported production cuts of around 20 per cent. Akai Electric, another audio product leader, bas predicted a

net earnings loss of Y5.3bn in its business year which ended this November and is seeking voluntary resignations from about 20 per cent of its work force. Matsushita has also re-assigned large numbers of staff to front-line sales positions.

Akai'a difficulties, in common

with many makers, have been compounded by a slowdown in orerseas sales. The critical area of decline is in systemscomponent type stereo sets, with a 20 per cent drop in domestic sales, worth Y106bn,

The miniature TV market bas been re-vitalised by Suws Seikosha's wristwatch TV, the first to succeed in applying a

VTR demand

Japan for less than Y150,000

tionsi products. This adds to optimism that s mass-market product may not be far away.

A bright note in the industry is sounded by the DAD, invented by Philips of the Netherlands, which was simultaneously launched by Sony Corporation. Hitachi and Niptaneously launched hy Sony Corporation, Hitachi and Nip-

predicted for this year.

Production of colour TVs has fallen by around 19 per cent. Makers are, bowever, still anxious to retain a sbare of this msrket which remains a funda-mental one. One reason for the importance of TV is its growing role as a component of computer-related innovations.

first to succeed in applying a liquid-crystal display to flat screen tachnology. This will be marketed esrly next year, priced around Y100,000. Production of Sony's cathode ray tube flat-TV, launched in February, has now reached 5,000 units a month and demand appears favourable. High-definition TV, utilising 1,125 scanning lines compared to the 525 of conventional systems, is being researched by Matsushita. Sony and others. News that the Nippon Telephone and Telegraph Corporation (NTT) has started high-

tion (NTT) has started high-definition optical fibre cable television broadcast tests increases bopes that the medlum could soon support e fresh wave of consumer goods.

Demand for VTR products remains comparatively strong, although fierce competition has eaten heavily into profit margins and downturn seems close in an industry which has depended on expanding overseas markets. After over-supply, VTRs can now be obtained in

per unit.
The VHS system first developed by Victor and Matsushlts bss outperformed Sony's Betamax machine in the market place. While it bas reduced place. While it has reduced its VTR production, Mstsushita neverthaless expects sales this year of around Y5bn. Sales of video-disc recorders,

marketed only by Pioneer at this stage, bave reached only around 30,000 units, weil below original peojections. Sanyo, among others, reports a readiness to enter the medium, using eny of the three available formats if conditions improve, but until machines with a recording facility arrive the market looks

Sony has just announced an optical la disc capable of recording both digital and analog signals, designed for institutionsi products. This adds to



Games provide one area for expansion in the home video market. This is Atari's Dodge Em which simulates the trials and tribulations of driving in heavy traffic

Columbia from October 1. The 12 cm diameter laser-resd compact discs offer superb discompact discs offer superb dis-tortion-free sound and, unlike conventional discs, surfsce scratches do not affect playing performance. The DAD player can be hooked up to conven-tional audio equipment with ease and there is full compsti-bility between different makers' systems.

Nina companies are now mor-keting the product on licence from Philips-Sony, with player prices between Y168,000 (Sony) and Y250,000 (Onkyo) and discs selling for Y3,500 to Y3,800. Sony will market the DAD in the UK, France, West Germany and Holland from March 1983.

March 1983.

The dangers of going it alone with s new product breakthrough hava been brought home by the trials of the Pioneer video discs. The Sony-Philips partnership, on the other band, has sought to cultivate a climale of mutual enterprise among rival electronics goods manufacturers and has aimed, ahove all, at product compatibility and an orderly compatibility and an orderly

market.

As part of this atrategy, the DAD was brought gradually to the public's notice over a three-year period. Until August, this resulted in cries of alarm from relailers who feared the public would lose confidence in a product which, once announced, took so long to reach the shelves. Retailers are de-lighted now, bowever, to find demand outstripping supply.
Only CBS/Sony and Nippon
Columbia now run compact disc production lines but these are being utilised by other makers. Sony plans to produce 3,000-5,000 units per month, while other makers initially plan 1,000 or less. Sony claims e total of 3m discs could be pro-

duced by the end of next year,

which it considers sufficient for the planned maximum bard-ware output of 300,000 units. Approximately 350 disc titles Approximately 350 disc titles will be available by the end of 1982, from four firms, but producers recognise that the success of the DAD hinges on their ability to boost this figure rapidly in the new year. They are aided in the task by the are aided in this task by the verticle integration of software and hardware firms like Toshiba/EMI and Sony/CBS and claim to bave made the necessary preparations.

Competition

Hesdphona stereo cassetta players continue to sell well in a market enlivened by fierce competition between the established Sony Walkman and Matsushita's new World Way model, though domestic demand is now levelling off at between 15m and 2m units per tween 15m and tween 1.5m and 2m units per Hand-held personal

puters promise to be one of the fastest growing consumer items. One Tokyo shop is already selling these, plus desktop models, on ell of its six floors. Sharp, Casio, Sord and Brother are among the eight companies to have launched recently, models in the under £100 to £200 range and over 90,000 unit sales are expected for 1982. NTT bas nounced a new programming language based on Japanese, which could make these products more accessible to users. Consumer ilems such as wristwatch electronic translators and solar-powered radio headsets abound, as ever, but Fuji Photo Film perbaps takes the prize with its new £25 "tsiking" instant camera. The camera incorporates speech syn-

thesis integrated circuits and

when used in the dark, for

example, can instruct the user "Let's use strobo flash."



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World leader in rapidly expanding sector

ROBOTS

JUREK MARTIN

WHEN, ABOUT a year ago, there were those, perhaps harbouring inner Luddlte that awful age of man's domination by thinking machines had finally dawned.

The facts in this partcular case were much more prosaic with the blame more properly attached to an un-thinking human (who happened to forfelt his life) than to a malevolent piece of metal and microelrenitry. But, nonetheless, there is something of an air of Japanese robotics industry.

Scarcely a week goes by, it appears, without some manuappears, without some manufacturer unveiling a versatile new piece of equipment: rebots that can turn the pages of books, so thet they may be more easily photographed by a robot-controlled camera: maintenance and inspection robots that can eperate inside the heart of a nuclear power station or can move snakelike in confined quarters: domestic robots that will welcome you on your return home, turn on the lights and pour a cup of

robot that makes sushi (raw fish on rice balls).

Sensational results are already being claimed: the Yamazaki machine tool plant that now uses 12 workers instead of 220 because of round-the-clock robots is perhaps the most famous. More broadly, the Japanese car industry now produces about industry now produces about four times as many cars as it did 10 years ago hut with exactly the same 450,000 strong labour force.

But the exotic should not disguise the fact that Japanese rebotics, its technology initially borrowed from the Entered is already comfort.

Europe, is already comfort-ably the world leader in a rapidly expanding field. About 70 per cent of the estimated 125,000 robots functioning in 125,000 robots functioning in the world are in use in Japan. In 1968, Japan produced its first 200 units (for spot-welding tasks in the car industry); in 1975, according to the Japan Industrial Robot Association, this had risen to 4,400; in 1980 ontput was up to nearly 20.000 and It rose by

following year.
In 1980, total production
was valued at Y78hn. The
association now estimates that
industry output will be worth Y300bn by 1985, implying a growth rate of 30-40 per cent a year in the present five-year

span. Repotics is already an

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facturers (about twice as many as in Europe and the U.S. combined), including many of the leading Jopanese industria) glants—Mitsubishi, Fujlisu, Ritachi, Toshiba, Kawasaki and the phone com pany, Nippon Telephone Telegraph. Backing formidable research development resources are more than 80 industrial robot

Quality control

The acceptance of the robot in Japan can ho attributed to e variety of commercial and sociological stemmed from the need to improve quality control to climinate the cheap and world markets. But equally important, in the tight domestic labour market, was the pronounced shortage of skilled workers, qualified welders.

Robots first made their mark in heavy industry where they might, in another country, bave expected to encounter resistance from the bumans they were to replace. But Japan's system of lifeoften assumed in the West) meant that few lost jobs:

other positions inside the same company. Additionally, Japan has a literate and technologically workforce, perhaps more aware of the opportunities opened up by automation than their conferes else-

early growth of robotics in Japan is the extent to which they have been taken up by small and medium-sized businesses, themselves par-ticularly feeling the lack of skilled workers in the tradiwelders go to such firms. Tales abound of small cottage industries (food packaging, for example), where the employer spends the day on the golf course while his wife keeps an intermittent eye on the robots.

Small business, with less continuous has been attracted.

capital, has been attracted because not surprisingly with new technology, robots have simultaneously become more versatile and, above al cheaper. A typical "playback robot for industrial use cost more like Y10m, against YISm a few years back. This is now not much more than the Y7.8m which, according to Nomura Research Insti-tute, the Japanese manufacturlimit on investment in e skilled manual worker. So far in Japan, robots have made their greatest headway

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ROBOT MANUFACTURERS 1975-81 *1981 fiscal Barnings per year robotics % sales 4,419 Fuiltsu Fanu Electric machiner Are welding, spray painting Electronics Are welding Electric machinery 23.3 Spot and arc welding Heavy machinery -23.8 Kawasaki Heavy Kobe Steel Painting and arc welding 52.0 Painting and are welding Heavy machinery Mitsubishi Heavy Nachi Fujikoshi Nitto Seiko Arc welding Osaka Transformer Saukyo Selki Arc welding Special purpose vehicles Shin Meiwa Industries Shock absorbers, compressors Painting

Estimate. D-company reported a deficit in one period. † At March 31, 1882. Source: Phillips & Drew

Motors, electric machinery

Finance", April, 1982.

Yasukawa Electric

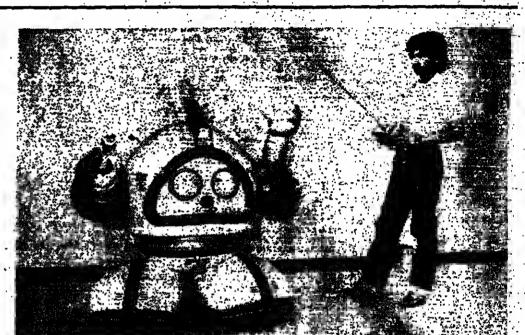
Are welding

cent development of an ex-perimental "Japanese text-tospeech" system opens in-triguing applied possibilities). According to recent projections by the Japanese Robo 1990 will still outnumber other sectors by about 10 to

become a subject of inter-national trade dissension. Jepanese domestic demand has consumed most production to date and Japanese manufacturers claim they are not yet canable of mainten-ance on robots in far fing parts of the world. However Yaskawa, an industry leader, is selling nearly 20 per cent of its output overse

USAGE OF ROBOTS

	1976	1981
Electronic equip-	21	38
Automotive manu	30	26
Synthetic resin processing	13	9
Other	34	22 .
Exports	2	. 5
Total	100	100
* Estimate Source: Japan Inc. Association	dustrial .	Robot



Robots in the home. At the toy stage only at the moment is Sindayn (above), produced by Namco, Japan's leading toy robot maker. He (or she) stands nearly five feet high and can move in all directions by radio control and has a wide repertoire of phrases. Below, a more traditional car assembly line



Drive to diversify as sales turn sluggish

MOTORS

WALTER W. MILLER

JAPANESE motor manufac turers, confronted with protec-tionism abroad and slumping sales of home, are diversifying their activities, producing everything from missiles to computers that tell drivers when they are sleepy.

With an eye towards the 21st century, Japan's motor industry is pushing ahead with a strategy focusing on three specific areas—wide use of electronic technology, establishing overseas production focilities and applying its expertise to other sectors.

Japanese motor industry is the world's largest in terms of production, it has performed sluggishly during the past year. No longer is it the locomotive pull-

Total production for fiscal 1981 was 11.18m vehicles, an in-crease of only 1.2 per cent over the previous year. For the first half of the current fiscal year (ending March 31, 1983), production slumped 3.9 per cent from a year before, to total 5,387,297 units, according to the Japan Automobile Manufac-turers' Association (JAMA). This marked the second con-

secutive half-year decline for the industry. A fall in the number of vehicles shipped overseas and a falling off in domestic sales added further problems for Japan's 11 automakers. Exports during the first half of the 1982 fiscal year (April-Sep-tember) fell 6 per cent from the corresponding period of last year to about 2.84m units. The registration of new pas-senger cars here also was slug-

over the previous year, according to JAMA figures. In a bid to break out of domestic economic doldrums and to jump protectionist barriers in countries where the path to trade was previously

and building plants in foreign year, markets where resistance is Ne

Toyota, Nissan, and other car

manufacturers also are producing cars using optical fibres
instead of traditional metal
wiring computers that regulate
everything from fuel injection to climate control inside the car rapid demand among Japanese

Aggressive

Japanese automakers also are Japanese automakers also are aggressively attacking markets in developing countries. Nissan, for example, builds trucks in Pakistan and Kenya. Suzuki Motors recently signed an agreement with the Iudian government owned Maruti Udyog to build India's first modern motor vehicle plant. modern motor vehicle plant, which will turn out small cers and light commercial vehicles, Suzuki will invest more than U.S.2200m over the next five

years in the project. Japan's motor industry. fact, has been too successfuland therein lies the problem. The massive demand for Nis-san's Toyotas and Hondas coin-cided with a survival of the fittest struggle among the West's traditional automotive glants such as General Motors.

For this reason Japan has been forced to restrict its car exports to the U.S. and several European countries. For example, 1982 was the second consecutive year Japan "voluntarity" held car exports to the U.S. to 1.68m units. It is likely that

Nevertheless, the British Prime Minister, Mrs Thatcher, "You are sleepy. Stop the would like to see Nissan set np car and take a rest," a female shop somewhere in the UK. She voice firmly declares from a made a personal plea to that microcomputer available on affect in September when she some cars made by Nissan, met Nissan chairman, Katsuji Japan's second largest auto-Kawamata in Tokyo.

However, Nissan officials said they were standing behind an earlier decision postponing any commitment on building a UK

to climate control inside the car and computers that unless they car owners for vehicles equipped recognise the voice of the voice of the driver will not permit the car to start.

The first Japanese car to be built in the U.S. rolled off the assembly line recently of the new Honda Motor Company plant in Ohio Nissan's first U.S. plant, located in Tennessee, is scheduled to start producing pickup trucks in August 1983.

Appressive diesel engine in two of its models. The 2400 cc engine has a maximum power of 96 hp, according to Toyota, and a 12amount and timing of fuel

> In its bid to be the leader in high-technology passenger cars, Nissan opened last year a U.S.\$263m technical centre-where the major portion of its research and development, is conducted."

> Nissan, as well as Japanese automakers, is taking the technology learned from producing cars and applying it to other fields. Involved in the production of

solid-fuel rockets for the past 26 years, Nissan is branching out even further, announcing recently a comprehensive tie-up with Martin Marietta Corp., the major U.S. missile producer, for designs and production tech-nology. Nissan plans to use this in its drive to win a larger share of Defence Agency con-tracts for missiles and other military equipment.

Another sector of the moto-

550 cc or less. Sales of mini-cars ero expected to hit an all-time high—about 1,290,009 units—for the fiscal year end-ing March 31, 1983.

For the first nina months of 1982, domestic sales were 970,000 units, a leap of 7.6 per-cent over the previous year, according to statistics released by JAMA.

Painful sting

their reliance on exports for more than half of the industry's business. As a result, the industry as a whole is placing greater emphasis on the At first glance it would appear that the domestic market

is a virtual gold mine for Jopanese automobile manufac-turers. The market is still the second largest national market for automobiles in the world. The number of passenger car on the roads had risen to 24.50 last year from less than 500,000 in 1960. As of 1980, there was one car for every 3.1 persons in Japan, a figure that is far above the 1.4 persons per vehicle in the United States, but below the

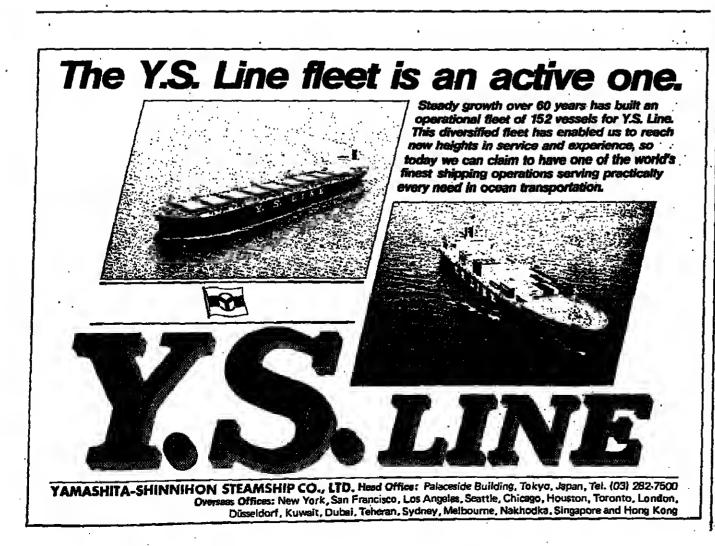
3.2 persons per car in the UK, according to Ministry of Trans port figures. But the competition for sales among Japan's 11 motor mana-facturers is fierce and a expected to increase since exports from Japan are likely to show only limited growth and there are signs new car sales ore beginning to decline.

owners must submit their cars to strict inspection tests every the tests and the frequently required repairs induce many people to trade in their car for

the first inspection for a hew car would come every three years with subsequent one

every two years.

If approved, this new system



JAPANESE INDUSTRY VII

Sector is second highest employer of labour

SERVICES CHARLES SMITH

ALTHOUGH JAPAN is nor-mally thought of as a manufacturing centre par excellence one of the more striking features of the past few years has been the growth of e flourishing service

sector.
Services "proper" accounted for 12.7 per cent of Japan's nominal GNP in 1980 (up from 9.98 per cent in 1970) and were employing a substantially larger number of workers than any other center of workers than any other center of the sectors other sector of the economy except wholesale and retail trade. Economic analysis expect the aervices sector to continue grow-lng fairly rapidly for at least the next two decades, even allowing for the fact that some

traditional Japanese services in-dustries seem likely to face stagnation or decline. The factors that have turned Japan into a service-orientated acciety in the past few years are extremely diverse although, in many cases, they probably resemble similer trends in advanced Western industrial

Satisfaction of consumer de-mand for a broad range of "standard" manufactured goods is cited as one of the key elements in the emergence of a Japanese aervices boom from the mid-1970s onwards.

Two other major factors appeared to bave been the rapid replecement of the traditional Japanese

STEEL EXPORTS BY PRODUCT

family (in which the older (reflecting the increased wil-generation performed services lingness of Japan's once con-in the home) by the smaller and less self-sufficient nucleer buying on credit). less self-sufficient nucleer family and the growing tendency for Japanese women to go out to work.

Changes in family structure and enhanced consumer spend-ing power probably account for most of the switch from pro-ducts to services that marked Japanese spending habits from the mid-1970s onwards but a third important factor may also bave been at work.

More leisure

The vast proliferation of passenger cars and the aimulsenger cars and the aimul-taneous improvement of the Japanese road system that dates from the late 1960s made it possible for consumers to leave their bomes in aearch of enter-tainment or leisure instead of staying at home "consuming' manufactured products.

Service industries whose growth reflects recent changes in the social structure of Japan and in the spending habits of its consumers include the hoom-ing "family restaurant" sector, self-service laundry chains (which were a more recent development in Japan than in most Western countries) as well as Western style inns and

Privalely-operated educational services stretching all the way from after-school coaching establishments for children to companies providing specialised culture courses for housewives bave been another booming sec-

tor, as have discount stores

However, industries that cater chiefly or wbolly to individuals have not been the only sector

nave not been the only sector of the service economy that has hoomed over the past few years. Almost equally noteworthy has been the growth of a "corporate" merket for services. A factor that has forced Japanese companies to start buying in servicea from specialised contractors during the past ten years instead of the past ten years instead of maintaining a policy of service aelf sufficiency would seem to heve heen declining profitability and the need to adjust to a slower growth rate in the economy as a whole.

Companies that could once afford to operate in house transport services staffed by full-time workers with life-time employment status bave, in the past five years or so, hecome customers for independent car hips companies or goods transhire companies or goods transport contractors. Full-time security staff have been replaced in much the same way by specialist supplied outside contractors es have catering and

The growth in corporate demand for services is highlighted by figures which show that (as of the late-1970s) 60.4 per cent of companies in Japanese manu-facturing industries were subscribing to externally supplied security services, while 82 per cent were using cargo transport services and 67 per cent were customers of leasing companies (e type of business which made

HOW SERVICES SECTORS HAVE GROWN

(per cent of national income)			
	1960	1970	197 9
Japan	48.9	54.1	59.5
U.S.	59.0	63.6	63.8
West Germany	42.3	43.8	49.8
France	44.3	49.9	55.9
Source: Bank of Japan			

Note: The sectors include government services, teensport retail and wholesale trade, etc, as well as services proper.

The same survey of corporate services indicates that, by the

late 1970s, Japanese companies bad begun to bire some of their permanent lahour force through specialised contractors instead of looking after their own recruitment on a direct basis.

Economic analysts who have traced the growth of Japan's service seclor over the past five years have a number of points to make about the significance of the phenomenon. One observation which is frequently observation which is frequently stressed is that, whereas, during the high growth period of the 1960s and early 1970s, the growth rate of the aervice sector appeared to be diclated mainly by what was happening elsewhere in the economy, today services have become a leading factor capable of leading factor capable of stimulating the demand for manufactured products. A typical example of e service dustry geneceting demand for

manufactured goods is the grow-ing popularity of central

STEEL EXPORTS BY DESTINATION

restaurants in restaurant sector. Central kitchens require con

puters and facsimile equipment to perform their functions and represent an input into information hardware

Japan'a service sector, like that of other netions, has traditionally been regarded as a lahour intensive area of the economy — and this remains true of traditional (hut declining) sectors such as Japenesestyle inns or public hath bouses. In many "new" service industries. however. producindustries, however, productivity has grown rapidly in the past few years es companies have found ways of substituting electronic equipment to perform tasks that were once carried out by buman workers.

Turnover trebled

Nippon Kelbi Hosho, one of lbe top companies in the pri-vate security services industry, has halved its labour force over the past ten years, even though turnover has more than trebled turnover has more than trebled during the same period, by the simple procedure of inserting sensing devices on the premises of its clients as a substitute for the retired policeman or aelf-defence force personnel who provided security services in the past.

The services boom in Japan has not yet reached the point where the economy is as heavily orientated to non-man nearly orientated to non-manufacturing activities as is that of the U.S. (see table). However, Japan probably already ranks et least in second position in this respect among major industrial countries. In the next 20 years the chief. Som the next 20 years the shift from goods to services may well accelerate further.

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Gloom sets in as profits dive

STEEL IAN RODGER

JAPAN'S VAUNTED steel industry has plunged this year into the melting pot that has en-guiled other major steel producing areas in the western

Demand is slumping at bome and abroad, company profits are disappearing and investment progarmmes are being curtailed. Worse, the country's steel industry leeders have abandoned their rustomary bounce and have joined their European and North American colleagues in expressing bleak views about prospects for the foreseeable

The latest pessimistic forecast has come from the Ministry of International Trade and Industry which reported late last month that cepital spending by Japanese steelmakers could by Japanese stepimakers could fall nearly 4 per cent to under Y1 trillion (\$2.85bn) next year. This follows the interim financial reports from the major producers showing sharp profit declines at three of the five largest companies. Nippon Stall the largest companies.

largest companies. Nippon Steel, the largest steelmaker in the world, recorded its lowest production volume for any sixmonth period since the formation of the company by a merger in 1969. Sales were down 6.9 per cent to Y1,434bn and operating profits fell 58.5 per cent to Y28.9bn.

Sales down

Kawasaki Steel and Kobe Steel also suffered lower sales and earnings. Nippon Kokan (NKK) and Sumitomo Melei had profit increuses but both expected sharp falls in the second half.

olcture last year, mainly be-lause of the strength of U.S. lemand for the oil exploration ndustry. Jepan accounts for wer half the world's seamless lipe capacity of 8m tonnea and

shock but it is now accepted that output is likely to fall even further next year and remain below 100m tonnes per year for several years.

several years.
Exports also peaked in 1974
at 33.1m tonnes of steel products and have fallen steadily
to 29.1m last year and probably variously estimated at 142m to 157m tonnes so this means the industry will have operated at about 70 per cent on average during 1982, a level et which it is very difficult to make money. However, by late autumn, production rates were evan lower. The best rates, about 70 per cent, were being echieved by mini mills while the industry average had plunged to 60 per

Nippon Steel was operating at the Nippon Steel was operating and had closed 12 of its 25 blast furnaces, NKK was running at 50 per cent but its Fukuyama works—the world's largest integrated steel mill — was operating at only 40 per cent of cepacity.

It will not be clear until second half results are published just how well the Japanese producers can cope with very low betting is that they are manag-ing a lot better than the

Americans and Europeans. raw material costs and competi-tion from newly industrialised countries such as South Korea and Taiwan. They have responded by making massive investments to cut operating

In remaining profitable.

The most important invest-Snmitomo, the top Japanese ments have been in equipment producer of seamless pipes, forefor continuous casting of liquid cast an operating loss of Y5bn steel. This method of casting in the second but of the provides substantial cardinal in the second but of the provides substantial cardinal in the second but of the provides substantial cardinal in the second but of the provides substantial cardinal in the second but of the provides substantial cardinal in the provides substantial cardina in the second half. The pipe provides substantial savings in market had been the one bright energy and improvements in spot in an otherwise dull world yield compared to the ingot

capacity of 8m tonnea and throughout the 1970s and by the collapse of thet market end of last year was casting 71 early this yeer hit hard. per cent of its steel conlinuously They elso say they are willing Predictions last summer that compared to 60 per cent in West to negotiate a formal restraint years.

less than 25m tonnes this year. Japan'a eteel capacity is variously estimated at 142m to

ducers can cope with very low levels of activity, but the

Japan's steelmakers have come under increasing pres-sure in recent years from rising raw material costs and compencosts and so far have succeeded

route end all steel producers are working to increase the proportion of their sleel continuously

Japan has been a clear leader

Jepan's total steel production Germany, 27 per cent in the UK would fall slightly below 100m and 20 per cent in the US. and the settled recently between tonnes this year for the first The Japanese have elso led the US, and the EEC. They time since 1972 (and compared the way in such developments as to peak production in 1974 of operating blast furnaces withshock but it is now accepted that shock but it is now accepted that output is likely to fall even country's blast furnaces were diless units. oil-less units.

for three of the top five groups

progress has been in energy re-covery. NKK's uitra-modern Obgishima complex, completed in 1979, is 85 per cent self-sufficient in electricity, as e result of the use of waste gas, steam and air pressure. A more common rate in Europe might be 60 per cent.

Barrier

Against these advances, the Japanese producers are now running np against the formidable harrier of political rigidities. As demand continues to fail, it becomes logical times to fail, it becomes logical
to abut some works and concentrate production at others in
order to maintain efficiency.
But local governments in Japan
are so strong that this sort of
mova is virtually impossible, so
companies' financial performance could deteriorate rapidly.

The Japanese also recognise the increasing rigidities in world trade in ateel. Subject to restraint agreements respecting their sales in European Community countries since 1976, Japan's steelmakers this year have come under strong attack

In July, Mitsui, the trading company, pleaded guilty to fal-sifying U.S. customs documents in order to dump steel in the U.S. and paid \$11.2m in fines. Earlier, several other com-panies were accused by U.S. companies of dumping and being unfairly subsidised. In October, United States Steel Corporation went further, threatening legal action on the grounds that the Japanese were damaging the U.S. industry by diverting steel exports from EEC markets to the

the charges hut they recognise that the heyday of exporting to that country is over. They point out that they have cut shipments drastically to the U.S. since the spring and will continue to exercise restraint in the interest of orderly markets.

operating blast furnaces without using oil. At the end of last year, all but one of the country's blast furnaces were dil-less units.

Another significant area for progress has been in energy repovery. NKK's uitra-modern obgishima complex, completed in 1979, is 85 per cent self-units and the country's as a 1981 rolled mainly into sheet. 1981, rolled mainly into sheet. The company owns coal and iron ore deposits and had sales of \$1hn in 1981.

NKK and Mitsubishi and Marubeni, two other members of the consortium, asid they had been exporting various aleel products to the U.S. and had "come to the conclusion that it would ha most desirable to enter into the American market as a steel producer in order to continue. producer in order to continue their long-standing relations with their customers in the U.S.'
In e similar move, Kobe Steel bes been considering participat-ing in a new seamless pipe mili project proposed by Wheeling-Pittsburgh in the U.S.

Japanese steel companies bave been looking in other directions as well, competing vigorously for Soviet orders for large diameter pipe and becoming in-creasingly active in the con-atruction of steel mills in developing countries.

There is growing fear that these moves, along with contioning marginal improvements in their aleelmaking technology will not be enough. Producers are now looking for a major breakthrough in the basic steelmaking process, such as the direct reduction of iron ore to steel, eliminating the highly expensive blast furnace.

In the meantime, they will have increasing difficulty main-tailing their competitive position, not just in world mar-kets but also at bome. Imports are still negligible hut producers J.S. In South Korea and Taiwan The Japanese have rejected have began to have an impact.

> No one is as yet making any comparisons with the eluminium smelting sector - which is being deliberalely run down be cause of poor prospects for remaining competitive — but the fulure for Japan's steel industry does not look anywhere as exciting as its past 20

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Falling demand and fierce competition cut order backlog

SHIPBUILDING BARBARA CASSASUS

AMID THE plethora of increasingly gloomy world shipbuilding forecasts, Japan is entering the slump expected to bit hard in 1984 in perhaps a weaker position and with fewer strategy options than when the first oil crisis sent the industry into a tailspln in the 1970s.

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Japanese builders by 60 per are under way to trim manpower halved the industry's labour some domestic owners' new cent to 1.95m gross tons (gt) levels in some yards. force, balted the price war — buildings.

In the first half of fiscal 1982. Prices are being cut, but the allowing prices to rise by 59 per This subsidy, which brought

ending next March, bringing it close to the record low of 3.2m gt in 1978 and to well under 50 to 60 per cent, barely cover-balf the 8.4m gt booked in 1981. ing materials costs, have not Statistics for exports, nor-mally representing 70 to 80 per

Falling demand for new vessels and fierce, often unbeatable competition from neighbouring countries, are starting to huri and could force even more builders, out of business than in the last recession. say

After a 10 cent of production, are especially grim. Figures released by

in the last recession. say experts.

After a 10 per cent drop in fiscal 1981 1April 1981-March 19821, new orders received by

The order backlog has shrunk to about a year. Builders are accepting delivery posiponement requests from owners to spin out the work in hand and moves

been forgotten. Quotations for 35,000 dwt example, are said to bave come down by 30 per cent from their Heavy Industries (MHI). In 1979 level and the industry feels that the major yards at least will not go further than working at cost.

The classic case is Missubishing th conventional bulk carriers, for

working at cost. Alternatives to excessive price cutling, enabling finan-cially sound builders to continue operating at the break-even point of 70 to 75 per cent of capacity until orders pick up again, suggests one expert, are ither hire purchase or "slock oat" construction of bulk carriers of 33,000 to 40,000 dwt, for which thece is always steady demand, if it can be pin-

Mini-boom

dustry was dealt with by two
measures, set up by the Ministry of Transport. One was for
61 companies, with facilities for building vessels of 5,000 dwt and over, to scrap 35 per cent of their capacity by March 1980. The target was slightly exceeded theoretically, but the investment of the scrap of the screek of proposals next year. dustry believes that Increased productivity has restored some

in the first half of fiscal 1982. Prices are being cut, but the allowing prices to rise by 59 per against the same period last industry is carefully svoiding cent between the second suicidal competition on the of 1978 and the first quarter of against the same period last ladistry is carefully svoiding cent between the second and suicidal competition on the suicidal competition on the first quarter of scale of the last slump. Out 1981 — and accelerated major companies' efforts to diversify their activities into other areas, such as offshore oil rigs, module close to the record low of 3.2m driven down by an estimated plants for export and land

> The shift has been so marked that experts describe the leading concerns as general engineering firms, rather than shipbutders.

> For some of the smaller companies, many of them concen-irated in the Inland Sea area, the last slump was particularly disastrous. Some 25 shipbuilders were declared bankrupt in the worst year of 1977 and the lotal either closed down or absorbed by competitors as a result of the crisis was thought to be well

anxiously looking for ways to Japan's share eased back to 49 maintain their operations, won-per cent in calendar 1981. Mini-boom

Bolstered by the order "mini-boom" of 1979 to 1981, most of the seven leading builders achieved spectacular sales and profits last year, shedding most loss making orders and should sustain their financial performance in 1982, predicts internation a maintain their operations, wondering if more capacity will bave to be scrapped to keep them to be scrapped to keep them to more paring can be done, primarily because of the difficulty of laying off staff in Japan, the low expected natural wastage rate and the hazards of transferring employees to other transferring employees to other devisions. tional Business Information, a divisions, also suffering from Tokyo-based economic research flagging demand.

okyo-based economic research
rm.

Others believe another 20 th
30 per cent should be scrapped
from the present 12.65m capteasures, set up by the Minisry of Transport. One was for
I companies, with facilities for
I companies.

It is an unfortunate coinciproductivity has restored some capacity in practice.

The second step was the formation in 1979 of a three-year anti-recession cartel of under 40 builders, which succeeded in reducing a version capacity in practice.

It is an unfortunate content of the formation in 1979 of a three-year anti-recession cartel of under 40 builders, which succeeded in reducing a version capacity and that 30 part of the fair Trade Commission for an extension and that 30 part of the fair Trade Commission for an extension and that 30 part of the fair Trade Commission for an extension and that 30 part of the fair Trade Commission for an extension and the fair that is an unfortunate content and the ducing average operating rates against their previous peak year by 39 per cent in 1979 and 1980 and 51 per cent in 1981.

These two measures nearly rate commission—and that as part of its attempt to narrow its buge budget deficit, the Government has withdrawn the interest differential subsidy, granted on

the interest rate on Japan Development Bank losas down to about 5 per cent, helped offset the high costs of operating Japanese flag carriers and encouraged owners to add to the nation's fieel, instead of opting for flag of convenience (FOC) carriers. Its removal is acting as a further disincentive to build at all, in view of the mounting pressure against FOCs and means even fewer orders for Japanese shipbuilders.

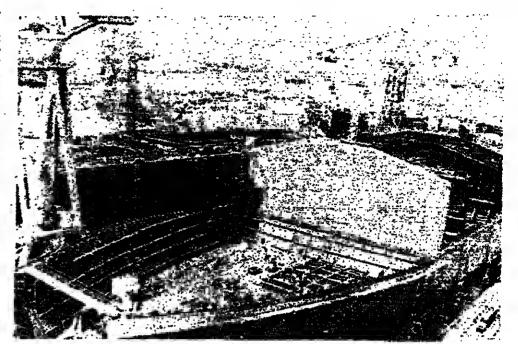
South Korea

The industry's main concern for the short-term, apart from demand for both bulk carriers and tankers being bleak this time, is the intensifying competition from industrialising countries. Notably, South Korea Is held partiy responsible for the erosion of Japan's dominant position in the world shipbuilding league and the loss of its international compentiveness.

Now the next recession is From more than 50 per cent approaching fast, builders are of world shipbuilding orders. per cent in calendar 1981, according to Lloyd's Register of Shipping, compared to South Korea's 8 per cent. In the first six months of this year, Japan's schare fell again to 47 per cent. while South Korea's doubled to 16 per cent.

As it is not a member of the Organisation of Economie Development and Co-operation, South Korea is bound by none of the constraints on capacity build-up and financing terms Japan and the other industrialised countries bave to comply with, Labour is cheaper and, moreover. South Korea offset any currency losses lbey denominates its contracts in might incur by gains in other dollars, a practice Japanese builders renounced before the temptation to quote in the quote 1973 oil crisis, when the sudden strengthening of the yen cost them about Y258bn in forcign exchange losses.

The recent weakness of the yen appears not to have helped Japan win overseas orders and,



Shipbuilding at Mitsubishi's Yokohama Shipyard & Engine Works

Nippon Kokan (NKK), have found the switch rewarding, as they each have secured a dollar-based contract for a container-ship from the European-South American Lines consortium. The Ministry of Transport determined to avoid another round of beavy foceign exchange

losses, is pressing other builders not to follow the example.

The consequences for com-panies enticely dependent on shipbuilding for their revenue could be severe, whereas at least diversified groups could

areas of their operations.

The temptation to quote in dollars is understandable. Of the international tenders called last year for about 50 vessels, Japan did not win one. Although it has done a bit better this year, despite the decline in tenders, recently Hitachi Zosen, although the industry stuck to its yen quotations for a long time, companies are now bowing. Heavy Industries of South to market forces and hidding in Korea for an order for four Sasebu-Knrushima and MHI were underbid by Hyundal Heavy Industries of South Ollars. Panamax tankers from the Two builders, MHI and Indian Shipping Corporation.

Hyundal's price was nuder- automated energy saving ships stood to be more than 10 per and will develop further their cent lower than the Japanese praised and exported produc and it offered two years' grace on top of the eight and a haif

year deferred payment period. Rivalry

The paradox in the rivalry between the nations is that South Kocea is employing exactly the same tactics as Japan did, when its shipbuilding industry was in its infancy.
In the early atages, South Korea
received technology from Japan
but when the competition
started to bite, such requests
were instantly rejected.

Lamenting its lack of government export subsidies, it was then Japan's turn lo cry "dumping." None the less, signs of peaceful co-existence are appearing. Last month, a delegation of Japanese builders visited Seoul for talks with their South Korean counter-parts, as a first stage in thawing the icy relations.

For the moment the Jananese For the moment the Japanese still lead in the construction of sophisticated vessels, although they suffered a blow last year when South Korea won a contract for a series of countainerships. The major companies intend to continue focusing on high-technology, high valueadded vessels, such as ilquefied natural gas carriers and highly served in the property of the property of the general conviction that the next few years could be the most devastating the industry has ever known.

praised—and exported—produc-tion technology.

Noted for its computer con-trolled assembly lines, Japan pioneered series construction and the block method of giant tanker production, while its automated welding is regarded as the finest in the world. The industry, under the auspices of the Shipbuilders' Association of Japan, has begun work on a project to increase automation and the use of robots, the ultiand the use of robots, the ulti-mate larget being virtually un-manned yards. In their effort to improve energy efficiency, major companies have broadened the emphasis from engine performance alone to in-clude hull and propeller design as well

as well.

Builders are bracing themselves for the worst, but take cefuge in the hope that their proven reliability and bigh quality work will still entice some owners to pay a premium for placing orders in Japan, especially for high-technology vaccule.

Research into six areas spearheads new strategy 990s. jects for specific products. MITI covered with CF reinforced This search for materials will generally hold patents on aluminum turbine blades in the ith superior qualities and the fruits of research. The corlate 1960s. The answer is

RODERICK ORAM

WORK ON new metals, plastics, ceramics and other materials has rapidly become a corner-stone of Japan's industrial strategy for the 1980s and

with superior economics was formalised last year when the Ministry of International Trade and Industry belped shape the most MITI set up a 10-year pro-

gramme to co-ordinate cesearch into six types of materials: High performance ceramics, mainly for operating at moce than 1,200 C in Internal com-hustion and jet engines.

 Synthetic membranes for new osmotic techniques to separate out sollds from liquids and gasses in pollution control.

Electrically conductive polymeric materials for use, for example, as plastic substitutes

for metal cables. · High performance engineering plasnes which, for example, would be stiff enough to substitute for aluminium.

• Advanced alloys with aligned crystals, single crystal or even amorphous li.e. giassy) com-position. Uses of these metals could range widely from high stress parts such as turbine hlades to superconductors.

The sixth area is advanced romposites ranging from carbon fibre reinforced plastics to ceramic fibre celnforced metals which, along with a rapidly ex-panding titanium industry, are seen as essential by the Japanese for developing an indi-genous aircraft manufacture. MITI plans to spend Y53bn

(£125m) on these six programmes over 10 years in its own laboratories. These are co-operative efforts, however, involving private sector corporate research which will raise the total granding anywhere. the total spending anywhere from six to 10 times.

In comparison, the UK Government intends to spend similar sums on new materials research but Britain has a far more modest industry multi-plier, believes Dr N. A. Waterman of Michael Neale and Associates, a Farnham firm of consulting engineers.

Broad goals

Dr Waterman and Dr Anthony Kelly, Vice-Chancellor of the University of Surrey, were cecently in Japan on a Department of Industry sponsoced study of new materials. Their findings are to be pub-lished soon by the Fellowship of Engineering.

The broad goals of the MITI programmes are few and simple. though the problems to be solved are many and hard. The Japanese want materials which are (a) light but strong: (b) functional at high temperatures: (c) have superior electrical and magnetic properties and (d) are energy efficient to make and use-the decimation of Japan's aluminium industry by souring energy costs has driven home the last point. porate sector will pay modest putent fees to exploit the fruits for commercial ends.

New materials are a growth sector in their own right. Japanese production of carbon fibre, optical fibre, new ceramics and polymers totalled Y237hn in 1980, according to the Nomura Research Institute. (The figure is inflated by a high proportion of less-than-exotic polymers rather than those of the new generation under develop-ment.) Nomura forecasts that output will grow at 21 per cent a year to be worth Y615bn in 1985 and then by 30 per cent a year to Y2,300bn in 1990.

This rate of growth obviously reflects far wider efforts than those under MITI's wing. Toyota Motor, for example, spent Y100bn last year on research and development into or about two-thirds of its R and budget. Here is a rundown of Japanese trends in some of the main areas. Carbon fibres. This is the classic example of Japanese commercialisation of a new technology. Until 1964, the U.S. UK and Japan were level pegging on CF. In 1970 Toray began commercial pro-duction in Japan with technology licensed from Union Carbide of the U.S.

Today Toray is the world's largest producer and with its Japanese competitors accounts for more than half the world's capacity. The Japanese are the lowest cost producers and are bighly rated. Boeing, for example, is a big customer for Like composites, ceramics and are seample is a big customer for Like composites, ceramics and are seample. Toray CF.
Japanese CF makers forecast

year to 20,000 tonnes. Aircraft makers are one of the main users now but car makers are one of the main users now but car makers are one of the main users now but car makers are one of the main users now but car makers are one of the main users now but car makers are one of the main users now but car makers are one of the main users now but car makers are one of the main users of the mai be taking half by 1990. The next blg leap for CF is likely to be a new precursor.

of CF but pitch, either from coal tar or petroleum, will be miques such as metal powderson term much cheaper. The big hitch is it needs cleaning which is only economic in big volumes, Japanese researchers are well tailor-made alloys. Significantly. advanced on this. Glass Composites:

Carbon fibre is vastly superior burgeoning use in aircraft, Plastic matrices, however, are

labour intensive to make and profit, according to Dr Kelly fashion into parts. Various who, with Dr Walerman, is Japanese companies are tackling writing the Fellowship of these production problems. A Engineering study. Foreigners hig help will be plastic resins ask where is the profit in new which harden at room tempera-ture unlike today's high tem-accept the high cost of developperature ones.

The programmes are broad in metal matrices, which it doinlinance in the market, they investigations, not narrow pro- attacks as Rolls Royce dis- ceap their profits.

probably ceramic fibres. Silicon fibre is in pllot plant production at Nippon Carbon and an aluminium oxide fibre head was demonstrated this ference in Japan.

Ceramics: Baking common minerals such as plumina under produces an exceptionally hard but brittle material capable of withstanding high operating temperatures. Old fashioned ceramics are insulators in spark plugs; more recently developed ones bouse integrated circuits. Kyocera (formerly Kyoto Ceramic) dominates the world

market for the latter, Attention has turned to ceramie applications in engines.

A metal diesel engine would
melt if it was not cooled down
to 800C by earrying away heat combustion energy. Ceramic engines operating over 1,500C would be smaller lighter and more efficient.

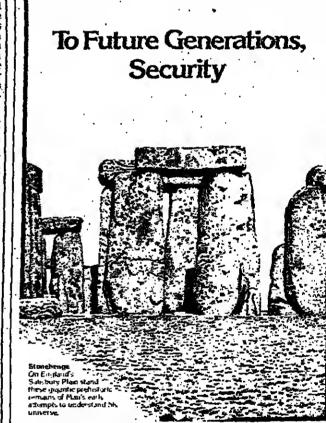
Ceramic engines

Kyocera has been working ceramic engines since 1977 and bas powered a car with one. NGK Insulators has been worksince 1979 with the aim of a Daiwa Securities report estimates that the Japanese motor vehicle industry will be using

Like composites, ceramics present a host of manufacturing problems. High cost is one impossible to machine. Castings are tricky because ceramics shrinks so much when sintered. Polyacrylonitrile is the starting Metals: The day is far from point now for about 90 per cent over for metals, although now over for metals, although new energy-saving production tech-niques such as metal powders steclmakers malerials in a wider context reinforced plastics are widely Nippon Steel, for example, used composites in, for boosted last year its research on example, boats and sports cars. carbon and other fibres and their composites with a view of to glass fibre for strengthening offering a broader range of plastic matrices, hence its materials than just steel. At the commercial heart of

vehicles and sports equipment. all this materials research is the Japanese attitude towards erature ones.

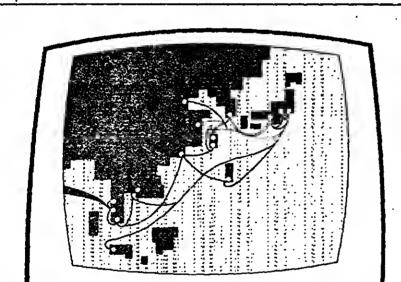
CF is no good over 400 C or Once they have achieved



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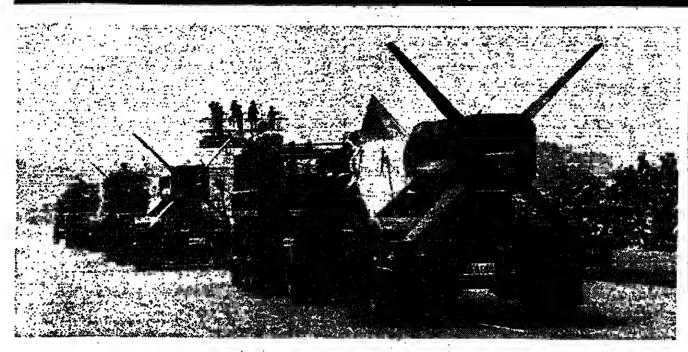
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JAPANESE INDUSTRY IX



These mobile guided missile carriers demonstrate the country's growing military potential

Policy switch could benefit electronic sector

DEFENCE JUREK MARTIN

THE POLITICAL and constitutional inhibitions that bave made the post-war Japanese defence industry almost diffident in comparison with the drive of similar and less sensitive sectors may be on the verge of breaking down.

This will not necessarily mean the re-emergence of Jopan either as a major military force in its own right or even as a first rank inter-national arms merebant, but it is now reasonable to foresee that, in certain specialised sectors, especially those with electronics opplication, Japan could become a significant could become a significant supplier of military bard and

software. Among the considerations holding Jopan back and the shifting current realities are its constitution, limiting the Its constitution, limiting the Japanese militery's role to national self-defence. The new Prime Minister, Mr Yosuhiro Nakasone, and a substantial body of thought in the ruling Liberal Democratic Party are talking of reviewing the informal Cabinet policy decision of 1976 that defence spending should not exceed I per cent of gross national product, a celling which is obout to be breached, parily because Japanese economic growth has slowed. Another ontstanding 10-year-old policy, effectively probibiting arms exports, may also be bending under U.S. pressure.

Cautious move

It so bappens that the Japanese body politic, which is probably moving cautiously to the right, appears less inclined these days to resist pressure on defence from the U.S.—and, under the Reagan Administration, this pressure bas increased markedly. Specifically, the U.S. wants Japan sharply to raise its defence budget not an easy political decision for the Japanese Gavernment in the

problems.

The U.S. wants Japan to take a more active air and sea role in policing the 1,000-mile sea lanes around its borders, thus theoretically freeing the U.S. Seventh Fleet to move,

if necessary, in e Middia
Eastern direction.

The U.S. also wants Jepan
to agree to technological
military colleboration, which
could entail breaking the eould entail breaking the arms export embargo policy. The Nakasone Government, intent on keeping relations with the U.S. on a close footing, may give on some or all of the ebove demands.

Given this political and strategie framework, the Japanese defence industry could assume new life. It is not insignificant already, in not insignificant aircady, in spite of the popular image thet Japan possesses inferior military capability.

Defence spending in nominal terms puts Japan in the world's top ten, However, both the U.S. and European governments.

governments bave repeatedly maintained that the obscene maintained that the obscene of the need to sustain a wideranging military establishment has freed Japan to concentrate on trade—with all
the well-known consequences.

What is evident is that the
Japanese defence industry is,
surprisingly, not especiallyprofit-oriented. The Government has, by its own standards, been relatively niggardly in its research and develonment financing, and in gardy in its research and the velopment financing, and in its permitted profit margins for defence manufacturers. As a result, none of the major defence contractors has more than 10 per cent of its overall business activities invested in defence,

It is often said in Jepan that the involvement of in-dustrial giants, like the Mit-subishi group, Ishikawajima-Harima, Kawasaki, and Toshiba, reflects their "patriotism" more than any Toshiba, reflects their "patriotism" more than anything else, since the economies of scale to date have not relal sense.

Under current budgeting plans, which may be im-proved by the new Govern-ment, the defence allocation

* DEFENCE SPENDING *

is shifting towards major arms procurement, and oway from simple maintenance of from simple maintenance of a modest defence force. The 1983-87 procurement schedule is 70 per cent higher, at X4.4 trillion to X4.6 trillion, than in the 1980-84 plan. This could constitute a consider-able enticement for tech-nologically oriented com-to get into the defence busi-ness.

Aviation projects

At present, the principal defence projects centre on aviation, and they reflect Jepan's close American connections, Japan is producing under ficence 138 McDonnell Donglas F-15s (designed to replace the F-4 as Japan's main fighter), over 70 Lock main fighter), over 70 Lock-heed P-3C anti-submarine patrol aircraft, and Bell heliare the Mitsubishi group, Kawasaki, Ishikawajima-Harima, and Fuji, but with widespread subcontracting.
The MTX jet trainer pro-

The MTX let trainer project is under the shared development of Kawasaki, Mitsubishl and Fuji, it must be remembered that Japan has not really had an affective domestic aviation industry since the war, and experience in military olicraft development could assist in the planned emergence of a Japan planned emergence of a Jap-anese civilian aircraft indus-try by the turn of the

century.
Yet, the greatest interest centres on the military application of the acknowledged Japanese sophistication in electronics. Already, the

Preparing for the next century

AVIATION

WALTER W. MILLER

AIRCRAFT manufecturing an industry dominated inter-nationally by the U.S. and Europe—may soon be faced with a serious challenge from Japan. a serious challenge from Japan.
The Ministry of International
Trade and Industry has
designated aircraft production
es a "target industry of the
21st century," setting the
industry the aim of becoming
competitive with Western
manufacturers by 2010.

The industry's growth in The industry's growth in recent years has been heavily dependent on defence contracts from country's Defence Agency. Manufacturers are gearing up to produce 75 F-15J jet fighters and 50 P-3C anti-submarine potrol planes under a \$17bn Government contract.

There is the likelihood, too, of further orders from the new Government. Prime Minister Yasuhiro Nakasone speaking at his first news conference since assuming office recently asserted that the Government may spend more money on defence,

Japanese Government has shown a predilection for encouraging domestic manu-facturers when it contracted for Toshiba'a short-range sur-

for Toshioa's short-range surfece-to-air missile in preference to the mare tested British Rapier and the joint U.S.-European Roland.

In Angust, the Defence Agency disclosed its intent to properly a characteristic missile.

procure e shore-to-ship misslie for the ground forces, with Mitsubishi the likely lead

minubishi the likely lead contractor.

If the U.S. interest in Jepanese missile development is strong, it may be more acute in the early warning radar field. The leaders here are again familiar industrial names — Nippon Electric, which built the existing Radge existent Hitseli, Fuitter and

system, Hitachi, Fujitsu and Toshiba.

It must be stressed that, while the political considerations seem to he moving inexorably, If slowly, in the direction of a more positive role for Jopan, they are not set in concrete. In defence, as in other areas, the American influence is paramount.

with Japan moving haltingly towards assumption of a
wider role, both regionally
and glabally, a change in
signals from Washington
(through a different administration, for example, or
inrough a marked reduction in
Rast-West tensions) could
after Japanese perceptions,
80, too, could a shift in the
domestic political mood,
which, particularly with
regard to military spending, is
still a highly charged issue.

TOP TEN SUPPLIERS
To defence agoncy (fiscal '80)
In Ym
L. Mitsphishl Heavy

2. Ishikawajiwa-Harima H.L. 108,800 3. Kawasaki H.L. 81,100 4. Miisuhishi Electric 72,400 5. Toshiba 32,900 22,300

8. Nippon Oil 12,000 9. Japan Steel Works 12,300 10, Sumitomo H.L 12,000

Nippon Electric C. Itoh Aviation

Industries
2. Ishikawajima-

He said "I understand the argument put forward hy the U.S. and its European ailies that Japan should increase its mili-tary spending now that it hos become a great economic power."

Military outlays

Since 1976 the Government bas limited military outlays to less than 1 per cent of the gross national product.

U.S. Government officials in Tokyo recently said Japanese oircraft manufocturers could do to us in aviation what they did to use in the automotive industry," and said Japan "will be a formidable competitor in the looming fight over who gets

Aviation analysts expect Japan to become the third source, behind the United States and Western Europe (represented by Airbus Industrie—2 consortium comprising British, French and West Cerman interests), for commercial airmanes.

Just when this will happen is the hig question. Although Boeing, the giant U.S. aircraft Boeing, the giant U.S. aircraft maker, recently introduced the newest commercial jetliner—the 767—analysts point out that many airline companies are pushing the industry for another passenger jet to fill a gaping hole in the market—a single-aiste twin-engina jet with 150 sears.

The Japanese are expected to play a major role in the develop-ment of such an aircraft, analysts say. They could either analysts say. They could exter do it clone, or more likely join either with Boeing or Airbus Industrie, sharing in the finan-cial risks and assisting in con-struction of the aircraft. Some significant steps elready taken by Jopan include:

• Three Japanese aircraft manufacturers were formed into a consortium to build part of the body of the 767.

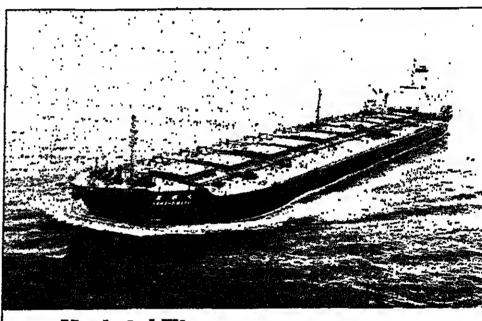
 With Britain's Rolls-Royce, a 50-50 partnership was formed to develop a new jet engine. Out of this, Japan gains advance aircraft engine technology.

 Two Japanese companies have joined with the United States on the so-called "YXX" project to develop and produce the next generation passenger jetliner.

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More research into genetic engineering techniques

BIOTECHNOLOGY

JEFFREY BROWN

BIOTECHNOLOCY in Japan has a research base that includes a large number of major drug and chemical companies. Like its counterparts in Britain and France, the Industry Is subject to government plan-ning but the main driving force behind its development remains free market forces.

At around \$14bn a year, the Jepanese market for drugs and medical diagnostics is the second largest in the world after the U.S. Japan today is responsible for something like a fifth of all new drugs under development, which is the sort of ment, which is the sort of medical hackground that could be expected to have hio-technological spin-offs.

Recent research shows that Japan has nearly six times as meny patente en inventions in hiotechnology outstanding than the U.S.

these cen be said to be researching vanguard genetic engineering techniques. The Keidauren also says that o further 49 of the companies in its review are and its main thrust into techno-

order to promote more con-Roche, which in turn is licensed certed epplication the Ministry by Cementech of the U.S. for of International Trade and In-dustry (MITI) went into action DNA-derived interferon. last year. The MITI is to pro-vide \$100m of government funds for a project aimed at basic technology for future industries."

The programme is spread over 10 years but it is plainly seen as a lead up to the next century by which time—if all goes well—today's laboratory techniques will be much closer to foctory production. to fectory production.

The government money is helog pumped into the research heiog pumped into the research centres of 14 companies within Japan's drugs, food and chemicals industries. They include such prestigious names as Mitsuhishi, Mitsui, Asahi and Sumitoms, and all are members of the Biotechnology Development Technical Association. The MITI has picked out three MITI has picked out three fields for specific research, gene-splicing, mass cell culture and bio-reactors.

Interferon

The Long-Term Credit Bank of Japan recently took a look The Keidanten, Japan's equivalent of the CBI, believes that some 113 major companies are working on some aspect of biotechnology. About a quarter of these cen be said to be researching years and generic angineer.

ing vanguard genetic engineering techniques. The Keidauren also says that o further 49 of the companies in its review are about to set up genetic engineering operations.

The threads of the industry are diffuse, however, and in the swiss group Hoffman-La institute is relatively unique for a privately owned instituta. This institute is relatively unique for a privately owned instituta. This institute is relatively unique for a privately owned instituta. This institute is relatively unique for a privately owned instituta. This institute is relatively unique for a privately owned instituta. The threads of the industry and its main thrust into technoment of interferon. Takeda has made new discovaries relating to the properties of the industry and heat resistant bacteria.

Takeda and Roche split their development costs down tha middle and the partnership led in January of this year to the formation by Takeda of an interferon production facility with the capacity to turn out 1,000hn units per month. Full scale clinical trials began this

The company's research efforts in the fields of recom-hinant DNA techniques, cell fusion and mass cell culture have recently been concentrated into a single research institute. Wakunaga has produced its own form of interferon and has also developed secretin, the

human gastro-intestinal bor-mone, by its own technology. Green Cross has been working on serum albumin and inter-feron through a tie-up with Genex of the U.S. Genex of the U.S.

The Long-Term Credit Bank makes the point that among chemical companies in Japan tha hlotechnology development race is being wen by Missiblish Chemical. The company tends to concentrate on drug work but is also planning the mass production of chemicals. It got into the business early, setting up the Mitsubishi-Kasei Institute at the beginning of the 1970s.

19705.

Through a network of share-holdings, Missuhishi Chemical has been taking action to gain a strong foothold in drug blo-technology. The company took an equity interest in Nikken Chemicals in 1980 and in Tokyo Tanabe a year later. Farlier Chemicals in 1980 and in Tokyo Tanabe a year later. Earlier this year it ceached an agree-ment with Cenentech of the U.S. which will eventually see the formation of e joint ven-ture producing serum albumin through a recombinant DNA

Fermentation

Leading the biotechnology challenge from the foods industry, is Ajinomoto which is able to call upon e vast experience ef the fermentation business.
The company is the world's largest producer of amino acids but it faces plenty of competition from within Japan.

Ajinomoto, which commands a substantial stock market following outside Japan, is a partner in one of the MITI's new
fual development projects.

Efforts in this direction are
geared to the development of
a fermentation process for tha continuous production of ethyl alcohol through genetically engineered bacteria.

The company has been cultivating close links with engineer-ing groups like Nikki in order to pool fermentation and gene-tic engineering know-how with plant engineering technology-seemingly along the lines of development work being undertaken in the U.S. by Fluor Corporation and Genentech.



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Cost of raw materials blunt competitive edge

TEXTILES

CHARLES SMITH

JAPAN'S man-made fibre industry, although still one of the world's largest, is in gradual retreat from its former position and seem almost certain to go of supremacy. That does not mean that the industry is about to lie down and die. Major fibre manufacturers such as Toray, Teijin, Asahi Chemical and others are carrying out some of the most imaginative and suc-cessful diversification programmes to be found anywhere in Japanese industry, using the the past four years. But the knowhow acquired in fibre overall profitability of the indusmanufacture as a base for moverage for the industry is well below the average for knowhow acquired in fibre manufacture as a base for moving into many new and promis-

The reasons why Japan's man-made fibre industry has lost its competitive edge over the last few years are not hard to find. Japan lacks indigenous raw mat-erials for the manufacture of fibres and is having to pay far more for its imported materials today than was the case before the first (1973) oil crisis. The U.S. fibres industry, by con-trast, benefits from relatively cheap raw materials because of the country's indigenous oil re-

Wages higher

A second problem is wages. Wage costs in the fibre industries that have been set up in "newly industrialised" nations such as Korea and Taiwan are currently about two-thirds of those of Japan. The products turned out by the industries in such countries are less sophisticaled than those produced by Japanese fibre makers but the gap between Japan and its oew competitors is tending to nar-row. According to Mr Hiroshi Inaoka, a director of Teijin, "The Koreans are about five years behind us today in terms of quality and sophistication. In the oil prospecting business and a few years time they could be into the motor import business

tiated" fibres. The ratio of dif- do with the textile industry, this case the link was provided ferentiated fibres in total Japan- Teijin, which has switched from by monomer technology). ese output rose from 40.5 per the "hopping" to the "base cent to 57.5 per cent between 1976 and 1980 and is thought to have riseo further still dur-ing the last two years. Despite this move into more specialised areas Japan's fibre exports passed their peak in both volume and value terms in 1975 on falling. The 1981 export figure of 680,694 tonnes repre-sented a 27 per ceot fall from the 1975 record of 699,760

Japan's fibre makers have managed to stay profitable in part by means of a 20 per cent cut in capacity carried out over Japanese Industry as a whole and may continue to level off -radually in future. It is against this buckground that each of the teo major manufacturers is purprogramme whose aim is to reduce fibres to a relatively small share of turnover-and an even smaller share of profits.

Diversification programmes carried out by the fibre industry fall into two main categories. according to Mr Takata, a spe-cialist on the industry at the Industrial Bank of Japan, Type one involves the use of a company's existing resources of manpower, finance and managenew areas where attractive marketing opportunities exist. The bigbly successful move Kanebo into the cosmetic dustry is a classic example of

Other instances of what one company has dubbed the "bop-ping" diversification strategy are Asahi Chemical's entry into the prefabricated housing market and the emergence of Toyobo as a major manufacturer of electronic components. Ex-treme examples of "hopping" include the entry (under a pre-vious president) of Teijin into the oll prospecting business and

good deal closer to us than al."

Loss of competitive edge in basic" or mass-produced Japanese fibre makers has been fibres has been partially offset described as the "base camp" A handful of designers has been will established interpretable of a company's existing know and involves the use been will established interpretable of a company's existing know and involves the use been will established interpretable of a company's existing know and involves the use been will established interpretable of a company's existing know and involves the use been will established interpretable of a company's existing know and involves the use been will established interpretable of a company's existing know and involves the use been will established interpretable of a company's existing know and involves the use been will established interpretable of a company's existing know and involves the use been will established interpretable of a company's existing know and involves the use been will established interpretable of a company's existing know and involves the use been will established interpretable of a company's existing know and involves the use been will established interpretable of a company's existing know and involves the use been will established interpretable of a company's existing know and involves the use been will established interpretable of a company's existing know and involves the use been will established interpretable of a company's existing know and involves the use been will established interpretable of a company's existing know and involves the use been will established interpretable of a company's existing know and involves the use been will established interpretable of a company and involves the use been will established interpretable of a company and involves the use been will established interpretable of a company and involves the use been will established interpretable of a company and involves the use been will established interpretable of a company and involves the use been will established interpretable of a company and involves the use been will established interpretable of a company and involves the use been

camp" approach during the past few years regards this as being the sounder long-term method of solving the industry's problems, although it admits that results can sometimes take a

Diversification

Typical instances of "base camp" diversification include the use by Toray and Teijin of bigb polymer technology originally acquired for the production of polyester fam that produce the polyester film that produce the holyester film that produce the polyester film that produce the produce the polyester film that produce the produce the produce the produce the polyester film that produce the prod vides the backing for VTR cassette tape. Toray's emergence as the world's leading manufac-turer of carbon fibre also took place as the result of a tech-nology transfer from its original base in the textile industry, as did Teijin's development of its pharmaceutical division (in

A slightly more complex case

of technical adaption is the

Companies like Toray, Teijin and Mitsubishi which have chosen to stress the "base camp" approach to diversification probably rank among the heaviest R and D spenders in Japanese industry — at least so far as their new fields of development are concerned. Mitsubishi and Teijin both spend about 3 per cent of their total sales on R and D but the direction of spending is overwhelmingly towards non-textile

move by Mitsubishi Rayon into the production of plastic optical fibres. Mitsubishi used its know-MMA (a specialised plastic) to develop the fibres which form the core of its "Eska" optical fibre and its polymer knowhow to produce the cladding.

In Mitsubishi's case some 40 nology fields, division which at the moment contributes a modest 3.2 per cent of the company's turnover. Teifin is also spending the bulk of its research money on new products, some of which it admits may take at least 10 years to reach the commercial stage.

> gard themselves as probably the most striking instance in Japan of a traditional industry seek-ing to move into new high tech-

Asahi Chemical

Kuraray Toho Rayon

Nitto Boseki

They are not per cent of total research alone, however, in pursuing this spending is the new products type of diversification strategy. The Japanese steel industry tries which began to lose com-petitive edge in Japan in the

Source: Industrial Senk of Japan

Diversification

ratto (%)

THE TOP TEN FIBRE MAKERS

bas its eye on carbon libres, for which coal pitch (a by-product of steel making) is a promising material, while the hard-hit Japanese petrochemical industry may be well be on its way to becoming a leading source of fine chemicals. Diversifica-tion could be the key to the future for a large number of the old basic materials indus-

Among the avant-garde designers, only a few, such as Mitsuhiro Matsuds of Nicole, Yohji Yamamoto of Y's and Rei Kawakubo of Comme des Garcons are making a significant room in New York for the sales impact in the West, either permanent display of Japanesecreating special collections or modifying designs and sizing to suit the different preferences

Many of the others, although pursued enthusiastically by unlikely to increase sub-foreign buyers, do not have the stantially in the next few years resources, nor apparently the and manufacturers are having resources, nor apparently the intention to export seriously for the time being, as they have not to yet realised their full petential do on the domestic market.

In contrast, manufacturers now producing high-grade ready-to-wear are expected to find the competitive Western markets hard to conquer and some wonder if the investment is worth while. There is caution in the industry that the fluery of excitement over Japanese designers will not necessarily spread to the mass manufac-turers, which on the whole have a week brand image.

The quality of Japanese work-manship, while valued for high fashion can work against exports to the U.S. market—the main target of the export drive so far. This is because the price factor overides durability and close attention to detail.

Invariably, the retail ticket in the West is three to four times because consignments have to be airfreighted so as not to miss out on volatile fashion

tackle the U.S. market, about 50 members of the Japan Women's and Children's Wear Manufacturers Association participated in the Japan Fashion Fair, held in New York in September 1981 and 1982, under the sponsorship of the Ministry of International Trade and Industry (MITI) and the Japan External Trade Organi-sation (Jetro).

In the first year manufacturers admitted they had not investigated the market sufficiently and made mistakes; the typical Japanese one-size-fits-all garment, abundant ornamentsizes of merchandise that was brighter coloured and less ornate, but although total orders were larger, individually they were still in small, experi-

mental lots.

As these brief exhibitions are inadequate for forming a long-term relationship with buyers, larger manufacturers are set leading retailers ting up representative offices or growing volume subsidiaries in New York and on their hands.

weighed by imports. There is also an irony in the attempt to Trading companies, which break into overseas markets, handle the bulk of Japan's with American marketing ar distribution firms. One trading company, Toyo Menka Kaisha Ltd. recently opened a show made apparel.

The government is keen in expand the clothing industry, with estimated Y7 trillion sales anually. But domestic sales are to rationalise their operations maintain their position domestically.

They have to plan long in advance for abroad, whereas the domestic design to sales cycle is contracting. They also have to re-organise their despatch system. Foreign buyers are used to writing orders for a foll season and receiving staggered deliveries, instead of the Japanese system of piecemeal ordering and virtually immediate ephagian. diate shloment

The smaller designers are trying to make their collections more accessible to overseas customers. Some 13 of them are grouped together in the Tokyo Collection Office to co-ordinate the fashion show sche-dules into a more concentrated period. However, the new de-signs are exhibited a few weeks later—some of the garments bearing little or no relation to those previously shown and that is when orders are taken. A further difficulty for mano be airfreighted so as not to miss out on volatile fashion trends.

In a collective attempt to tackle the U.S. market, about the fixed retail price, which carries a substantially lower mark-up than in the West. Fur thermore, the manufactures to department stores and some specialty outlet chains are mainly on consignment, with the retailers able to return unsold merchandise for credit against their next purchases One view is that to some, the lack of risk in selling on a firm contract basis overseas is not

always taken into account dur ing price negotiations. garment, abundant ornamenation and sombre colours were inappropriate for the American is leading some manufacturers consumer. The second year, into trouble, When production and sales were expanding fast, and sales were expanding fast, and sales were expanding fast, analytic of unsold goods the quantity of unsold goods was minimal. Now consumer spending is flattening out smal-ler apparel firms without sophisticated inventory control and sufficient muscle to with stand what they see as increas-ingly tough terms demanded by leading retailers are finding a growing volume of goods left

A handful of designers is now well established internationally

Tokyo look wins acclaim

FASHION

BARBARA CASSASUS

JAPAN is accustomed to capturing world beadlines for its phenomenal post-war economic growth and technological achievements, but it has been startled by the sensation its fashion has caused over the past two years.

The surge of its designers' creativity, frequently compared to that of London in the 1960s, shows fashion is yet another sphere where Japan can absorb the best of the west and innovate, losing its Image as an imitator by adding its own distinctive flare.

sive Paris Haute Couture cwn particular speciality and "Club:" Kenzo, who is based to "look," be added. "Club;" Kenzo, who is based to Paris and is claimed by the French as their own: Issey Miyake and Kansai Yamamoto. Receptly, after more designers started showing their collections in Paris and New York, critics began lavishing praise on Japanese fashion per se and buyers began coming to Tokyo

to seek out more talent. A buyer for a major London department store, on his first business trip to Japan last month, said the new wave of designers is producing direc-tional clothes, appealing to those searching for an important fashion statement. He points ant fashion statement. He points to the Japanese strength in casual day wear, attuned to contemporary living, and believes Tokyo will eventually become a major fashion centre, equal to Paris, New York, Milan and Loodoo. But this would widen the fashion chales within the In general, Japanese fashion

is noted for its excellent work-manship, fine detailing, excit-ing fabrics and subdued colours, together with comfortable styling giving a barmonious blend of Japanese tradition and modernity. Some designs, however, are so different that they are considered anti-fashion, almost a rebellion against the staunchly conservative Japanese

New dimension

This is a new dimension to the treod of western-style dress supplanting the traditional kimono. Japan's designers kimono. Japan's designers used to have to go abroad to earn a reputation, because only top foreign lahels commanded the respect of the domestic consumer and tastes focused on the classic tallored "look."

As the streets of Tokyo testify, quality classic clothes ports rose sharply between 1979 bave not lost their charm, but and 1981, they are still far out-

ence. The younger geogration change their image entirely in their leisure time and done perhaps the most daring in the world. And now, with the newly-acquired status of Japanese fashion, home-bred Japanese fashion, home-bred designers' clothes carry the

The popularity of foreign design names led to an influx of imports and in the mid to late 1970s a "licensing war," with tradiog companies, manufacturers and department stores vying with each other to tie up with the lending Furnishers and with the leading European and American fashion houses. The rush has subsided.

Some in the industry say it is because there are no more avalable licenses, others say it is because there are too many and that this, because of stagnat-ing consumer spending, is pro-ducing a spate of discounting. Although Japan's clothing ex-

The international balancer.

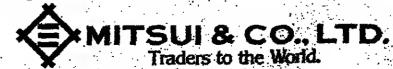
ed and thriving global economy.

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